The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[*The* MINING JOURNAL *is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.*]

No. 2578.—VOL. LV. LONDON, SATURDAY, JANUARY 17, 1885. [WITH SUPPLEMENT.] {PRICE ..... SIXPENCE. BY POST, £1 4s. PER ANNUM

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING STOCKS and SHARES (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Insurance, Assurance, Telegraph, Tramway, Shipping, Canal, Gas, Water, and Dock Shares, and all Miscellaneous Shares.

BUSINESS negotiated in STOCKS and SHARES not having a general market value.

Every week a GENERAL and RELIABLE LIST issued (a copy of which will be forwarded on application), containing closing prices.

MINES INSPECTED.

BANKERS: CITY BANK, London—SOUTH CORNWALL BANK, St. Austell.
TELEPHONE NUMBER 1003.

SPECIAL DEALINGS in the following (or part):—

100 Asia Minor, 17s. 6d. paid, 3s. 3d.
150 Akankoo, f. pd., 4s. 9d
100 Almada, 1s. 6d.
50 Bedford United, 24s.
150 Balkis, 3s. 9d.
50 Bratsberg, 21s.
250 Cankim Bamoo, 1s.
50 Carn Camborne.
100 Callao Bis, 12s.
100 Cartago, f. pd., 10s.
50 ditto, 15s. paid, 9s.
200 Calle Gold (New), 14s. 6d.
100 Colombian Hydraulic 13s. 6d.
50 Consolidated, 2s.
100 California, 6s.
25 Colorado, £2 10s.
50 Canada Copper, 3s. 9
100 Chontales, 3s. 3d.
175 Cor. South Australian Copper, 2s.
170 Cootacovil, 1s. 3d.
200 Denver, 2s.
100 Devala Moyar, 3s. 9d
20 Devon Con., £1 10s.
200 Devon Friend., 1s. 9 l
2 Dolcoath, £69¼.
50 Don Pedro, 6s.
100 Drakewalls, 2s. 9d.
50 Duchy Peru, 15s.
50 East Blue Hills, 8s.
150 Eberhardt, 3s. 3d.
20 East Lovell, off. wtd.
100 East Wh. Rose, 7s. 6d
25 Ecton, £1 10s.
3 El Callao, £68.
100 Frontino, 8s.
100 Goginan, 1s. 6d.
100 Gold Coast, 3s. 6d.
150 Glenrock, 2s. 3d.
25 Great Holway, 13s. 9
15 Great Laxey, £9¾.
100 Guinea Coast Gold.
25 Gunnislake (Clitters), 7s. 6d.
100 Hoover Hill, 4s. 9d.
50 Home Mines Trust, 17s.
100 Indian Consoli., 3s. 3
100 Javali, 4s.
100 Kapanga, 1s.
20 Killifreth, 18s.
20 Kimberley No. Block.
100 Kohinoor B, 3s. 6d.
100 La Plata (New), 5s. 6
25 La Trinidad, £5 5s.
50 Leadhills, 25s.
100 Lisbon-Berlyn, 16s.
25 Marke Valley, 7s. 6d.
25 Mason & Barry, £9 1 3
50 Montana, 24s.
100 Mounts Bay, 2s. 9d.
50 Mysore Gold, 22s.
50 New Caradon.
100 New Callao.
100 New Emma, 11s.
50 New Kitty, 26s.
200 Nouveau Monde, 2s 9
100 New W. Caradon, 2s.
100 Nundydroog, 7s. 6d.
50 Old Shepherds, 11s. 6
50 Ooregum.
50 Organos, 11s. 6d.
50 Orita, 30s.
50 Oscar, 15s paid, 15s. 3
50 Oscar Vendors', 20s.
20 Polberro, £2 3s. 9d.
100 Potosi (New), 17s.
100 Port Phillip, 2s. 3d.
200 Parys Copper, 1s.
30 Phœnix United, 25s.
30 Panuicilio, £3 3s. 9d.
50 Prince of Wales, 5s. 6
200 Pestarena, 1s. 6d.
10 Rio Tinto, £13 11s. 3
100 Ruby (old), 5s. 6d.
50 Do. (new), 5s.
15 Richmond, £3 11s. 3d
10 Roman Grav., £3 3s 9
20 Schwab's Gully, £5 7s. 6d.
100 Spitzkop, 11s. 3d.
50 South Caradon, 7s. 6d
20 So. Condurrow, £3¼.
100 South Darren, 5s. 6d.
50 South Penstruthal.
100 Tacquah, 1s. 3d.
100 Tambracherry, 6s 3d.
20 Tolima A, £4½.
20 ditto B, £3.
100 Transvaal Gold, 11s 6
100 Tregontrees, 3s. 6d.
100 Tresavean, 6s. 6d.
20 Trevaunance, £2 5s.
25 Untd. Mexican, 3 12 6
50 Van, 11s. 6d.
50 Victoria Gold, 12s.
10 Wheal Agar, £20.
10 Wheal Basset, £4¼.
100 West Callao, 3s. 9d.
50 West Phœnix.
50 West Caradon, 1s. 6d.
100 West Crebor, 2s.
50 West Polbreen, 12s.
10 West Kitty, £8 10s.
100 Wheal Coates, 2s. 6d.
50 Wheal Crebor, 21s.
20 Wheal Kitty, 24s. 6d
100 Wynaad Persev., 1s. 6

*** BUSINESS at CLOSE PRICES in all marketable TIN, COPPER, LEAD, GOLD, SILVER, and DIAMOND SHARES.

*** SHARES SOLD for the USUAL FORTNIGHTLY SETTLEMENT.

*** SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, or THREE MONTHS, ON DEPOSIT OF TWENTY PER CENT.

JAMES H. CROFTS, 1, FINCH LANE, LONDON.

HOME RAILWAYS — SPECIAL BUSINESS. — Fortnightly accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN, CANADIAN, AND FOREIGN RAILS—SPECIAL BUSINESS. Fortnightly accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

BANK, OMNIBUS, TRAMWAY, GAS, WATER, and CANAL SHARES.
BUSINESS in all the above, and fortnightly accounts opened.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS SHARES of all DESCRIPTIONS BOUGHT or SOLD. SPECIAL BUSINESS in:—
AQUARIUM. | IRON and COAL.
HOTEL. | ELECTRIC LIGHT.
And other COMMERCIAL or INDUSTRIAL SHARES.
*** Special Business in Bryant and May (Limited).
SHARES SOLD for FORWARD DELIVERY (ONE, TWO, or THREE MONTHS) on DEPOSIT of TWENTY PER CENT.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

OPTIONS in all STOCKS and SHARES dealt in.—
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

METAL MARKETS.—BUSINESS NEGOCIATED in TIN, COPPER, and IRON for usual settlemedts. and upon receipt of usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

LA TRINIDAD MINE.—FOR SALE, ONE HUNDRED SHARES (£5 fully paid) at £5 5s. net for three months' forward delivery on deposit of 20 per cent.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

DIAMOND SHARES OF SOUTH AFRICA —
BRITISH DIAMOND. | FRENCH DIAMOND.
KIMBERLEY CENTRAL, | KIMBERLEY NORTH BLOCK,
SCHWAB'S GULLY,
And other KIMBERLEY Mining Shares.
BUSINESS in the ABOVE at CLOSE MARKET PRICES for USUAL FORTNIGHTLY SETTLEMENT.
SHARES SOLD for FORWARD DELIVERY (ONE, TWO, or THREE MONTHS) on DEPOSIT of TWENTY PER CENT.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

TRANSVAAL GOLD SHARES — SPECIAL BUSINESS IN: —
BALKIS. | LISBON-BERLYN.
GRASKOPS. | SPITZKOP.
TRANSVAAL EXPLORATION.
Shares in the above Companies sold for the usual Fortnightly Settlement, or for forward delivery (one, two, or three months) on deposit of twenty per cent.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

GOLD AND SILVER MINES.—INDIAN, NORTH AMERICAN, SOUTH AMERICAN, WEST AFRICAN, SOUTH AFRICAN, and MEXICAN Mining Shares.
BUSINESS as BUYER or SELLER in all the above.
Shares Sold for Fortnightly Account.
Shares Sold for Forward Delivery (one, two, or three months) on deposit of twenty per cent.

AMES H. CROFTS, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
No. 1, FINCH LANE, LONDON, E.C.
ESTABLISHED 1842.
LONDON BANKERS—THE CITY BANK.

BRITISH AND FOREIGN MINING OFFICES.
MESSRS. PETER WATSON AND CO.,
18, AUSTIN FRIARS,
OLD BROAD STREET, LONDON, E.C.
BANKERS: THE ALLIANCE BANK (Limited).

MESSRS. PETER WATSON AND CO.'S BRITISH AND FOREIGN MONTHLY MINING NEWS—STOCK AND SHARE INVESTMENT NOTES—MINES, MINERALS, AND METAL MARKETS—SHARE LIST, No. 873, VOL. XVII., for JANUARY month, will shortly be ready, and will be sent to customers on application.
Annual Subscription..... 5s. | Single Copy..... 6d

MR. ALFRED E. COOKE, STOCK AND SHARE DEALER,
9, OLD BROAD STREET, LONDON,
ESTABLISHED 1853.
TELEPHONE No. 1268.
Mr. ALFRED E. COOKE can SELL the following shares, or any smaller marketable number at prices affixed FREE of COMMISSION:—

100 Almada, 1s. 3d.
300 Balkis, 4s. 9d.
15 Bratsberg, 20s.
100 Callao Bis, 11s. 3d.
50 Chile Gold, 14s.
30 Colombian Hydraulic 14s.
50 Cor. South Australian Copper, 2s. 3d.
25 California Gold, 6s 3d
10 Colorado, £2½.
80 Denver, 2s.
100 Devon Friend., 1s. 9d
120 Don Pedro, 4s. 3d.
50 East Blue Hills, 8s.
100 East Wheal Rose, 7s
20 Ecton, £1 11s.
1 El Callao, £68.
30 Frontino, 9s.
50 Goginan, 2s.
30 Hoover Hill, 5s.
40 Home Mines Trust, 17s.
140 Indian Consoli., 3s. 3
20 Killifreth, 18s.
50 La Plata (New), 5s. 6
20 Leadhills, £1 4s.
180 Lisbon-Berlyn, 16s.
50 Mounts Bay.
30 Mysore Gold, 21s. 3d.
50 New Caradon, 1s. 3d.
25 New Callao.
10 New Kitty, 25s.
200 Nouveau Monde, 2s 9
100 New W. Caradon, 2s.
50 Nundydroog, 8s.
50 Old Shepherds, 12s.
30 Organos, 13s.
25 Orita, 27s. 6d.
50 Oscar, 16s. 3d.
35 Oscar, fully paid.
50 Ooregum, 3s.
100 Potosi, 16s. 3d.
75 Prince of Wales, 5s.
10 Schwab's Gully, £5⅝.
20 South Caradon, 7s. 6d
75 South Kitty, 10s.
5 Tolima A, £4½.
50 Transvaal Gold.
20 Tresavean, 6s. 6d.
10 U. Mexican, £3 13s. 9
80 Victoria Gold, 11s. 9d
50 Van, 11s. 9d.
5 Wheal Agar, £20¾.
10 Wheal Basset.
30 West Callao, 4s. 6d.
30 West Caradon.
60 West Crebor, 1s. 6d.
5 West Kitty, £8¾.
20 Wheal Crebor, 22s.

BALKIS, LISBON-BERLYN, and TRANSVAAL BOUGHT and SOLD at closest market price.
FORWARD DELIVERY. | SPECIAL TERMS.
LARGE PROFITS. | Apply for List issued by ALFRED E. COOKE.
Daily and Weekly Lists of Prices issued to clients on application.
ADVANCES MADE ON STOCKS AND SHARES.
Letters and Telegrams receive immediate personal attention.
BANKERS: ROYAL EXCHANGE (Limited), London.

MR. JAMES STOCKER, STOCKBROKER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
Has Special Business in the following for cash or settlement by arrangement free of commission:—

75 Akankoo, 4s. 9d.
100 Balkis, 4s. 6d.
40 Bratsberg, 20s.
100 Californian, 5s. 3d.
80 Callao Bis, 12s. 6d.
45 Carn Camborne, 5s.
75 Chile Gold, 13s. 9d.
100 Chontales, 3s.
50 Colombian, 14s.
25 Colorado, 47s.
100 Corporation of South Australian, 2s.
30 East Blue Hills, 7s. 9d
50 East Rose, 7s. 6d.
100 Ecton, 31s. 3d.
55 Frontino, 9s. 3d.
90 Glenrock, 2s.
300 Gold Coast, 3s.
40 Great Holway, £5½.
60 Home Mines, 16s.
100 Ind.Consolidated, 3s 3
60 Kapanga, 1s.
30 Killifreth, 17s.
50 Kohinoor B, 3s. 6d.
50 La Plata, 5s. 3d.
80 Lisbon-Berlyn, 15s 6d
40 Montana, 25s.
50 Mysore Gold, 20s. 9d.
20 Mason and Barry, £9.
65 New Callao.
80 Nine Reefs, 3s.
75 Nouveau Monde, 2s 6
60 Nundydroog, 6s. 6d.
70 Old Shepherds, 11s 3d
80 Orita, 27s. 6d.
45 Organos, 11s. 3d.
35 Oscar Gold, 15s. 9d.
80 Potosi (New), 15s. 9d.
40 Prince of Wales, 5s.
30 Richmond, £3½.
25 Rio Tinto, £13¾.
20 Schwab's Gully, 5 11 3
20 Tolima A, £4½.
25 Untd. Mexican, £3¾.
50 Victoria Gold, 11s.
60 West Callao, 4s. 6d.

The following SHARES WANTED for CASH:—
100 Colombian. | 50 Lisbon-Berlyn. | 100 Montana.
80 Chile Gold. | 50 New Potosi. | 200 New Callao.
Railways, Foreign Bonds, Gold and Silver Mines, Miscellaneous Shares, and all Stock Exchange Securities.
ESTABLISHED 1851.
BANKERS: LONDON AND WESTMINSTER.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.
ESTABLISHED 1862.
BANKERS: LONDON AND WESTMINSTER, Lothbury, E.C.

JOHN RISLEY, STOCK AND SHARE BROKER,
AND MINING SHARE DEALER,
38, CORNHILL, LONDON, E.C.
ESTABLISHED 1860.
BANKERS: LONDON and WESTMINSTER, Lothbury, E.C.

MR. W. TREGELLAS, 40, BISHOPSGATE STREET WITHIN, E.C.
Deals in all descriptions of STOCKS and SHARES at close market prices.
W. TREGELLAS has special business in SANTA BARBARA and LISBON-BERLYN GOLD MINES.

MESSRS. CLARE AND CO., STOCK AND SHARE DEALERS,
16, AUSTIN FRIARS, OLD BROAD STREET, E.C.
BANKERS—THE ROYAL EXCHANGE BANK (LIMITED).
SPECIAL BUSINESS in all FOREIGN GOLD, SILVER, COPPER, and DIAMOND MINES.
FOR SALE,—200 shares TREGONTREES & OLD POLGOOTH. What offer?

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 30 Years)
Can SELL the following SHARES:—

100 Almada, 1s. 6d.
50 Akankoo, 5s. 3d.
20 Bratsberg, £1 2s. 6d.
100 Balkis, 5s.
100 Colombian Hyd., 14s
80 California Gold, 5s. 6d
35 Callao Bis, 11s. 6d.
30 Chile Gold, 14s.
100 Chontales, 2s. 9d.
20 Colorado, £2 10s.
50 Denver Gold, 2s.
25 East Rose, 7s. 6d.
20 Ecton, £1 11s.
50 Eberhardt, 3s.
20 East Blue Hills, 3s. 6d
40 Frontino, 9s. 6d.
75 Glenrock, 3s.
40 Great Holway.
50 Hoover Hill, 4s. 6d.
50 Indian Con., 3s. 6d.
50 Kapanga, 1s.
60 Kohinoor B, 3s. 3d.
20 La Trinidad, £5 5s.
25 Leadhills, £1 5s.
50 La Plata, 5s. 6d.
40 Lisbon-Berlyn, 15s.
5 Lombardy Roads Rails offer wanted.
20 Montana, 23s. 9d.
25 Mysore Gold, £1 2s. 6
50 Nouveau Monde, 2s. 9
50 Nundydroog, 6s. 3d.
50 Nine Reefs, 5s.
30 New Callao, 7s. 6d.
30 Organos Gold, 11s. 3d
25 Old Shepherds, 11s. 6
25 Orita, 28s. 6d.
30 Oscar Gold, 18s.
50 Ooregum, 3s.
20 Panuicilio, £3 3s. 9d.
40 Prince of Wales.
30 Potosi, 16s.
50 Roman Gravels, £3 5s
10 Richmond, £3 11s. 3d.
10 Schwab's Gully, £5 7 6
10 Tolima A, £4 12s. 6d.
20 Tolima B.
10 U. Mexican, £3 12s. 6
50 Victoria, 11s. 6d.
30 West Callao, 3s. 9d.
20 West Crebor, 2s., call paid.

SHARES BOUGHT AND SOLD AT NET PRICES.
PURCHASES FOR FORWARD DELIVERY AT SPECIAL PRICES ON RECEIPT OF DEPOSIT OF 20 PER CENT
BANKERS: ALLIANCE BANK (Limited).

MR. WILLIAM H. BUMPUS, STOCK BROKER AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
[Established at this Address in 1867.]
BUSINESS transacted in ALL STOCK EXCHANGE SECURITIES, MINING and MISCELLANEOUS SHARES of every description.
An INVESTMENT LIST free on application.
SPECIAL BUSINESS in the undermentioned:—

100 Akankoo, 6s.
200 Almada, 2s. 6d.
30 Bedford United, 22s 6
150 Balkis, 4s. 9d.
100 Callao Bis, 11s. 3d.
150 California, 5s. 9d.
75 Colombian Hydraulic, 14s.
25 Colorado, 48s. 9d.
20 Copiapo, 46s. 3d.
100 Chontales, 3s. 3d.
50 Carn Camborne.
25 Devon Consols, 30s.
15 De Beer's, £5¼.
100 Denver, 2s.
150 Devala Moyar, 4s.
2 Dolcoath.
100 East Wheal Rose, 7s 6
25 Ecton, 35s.
50 Eberhardt, 3s.
50 East Blue Hills.
50 Frontino, 8s. 9d.
5 Great Laxey, £10.
100 Glenrock, 2s. 6d.
70 Home Mines Trust.
120 Hoover Hill, 4s. 9d.
100 Indian Consolidated, 3s. 3d.
250 Kohinoor B, 3s. 3d.
25 Killifreth.
100 Lisbon-Berlyn, 16s.
150 La Plata, 5s. 3d.
60 Mysore Gold, 21s. 3d.
75 Montana, 26s. 6d.
50 Marke Valley, 7s. 6d.
20 Nerbudda, 39s.
100 Nundydroog, 7s. 6d.
150 Nouveau Monde, 2s. 6
70 Nine Reefs, 5s.
100 New Potosi, 16s. 9d
75 New Chile, 14s. 3d.
50 New Emma, 10s.
80 Old Shepherds.
50 Oscar Gold, 16s. 3d.
100 Ooregum, 3s. 6d.
40 Orita, 28s. 9d.
50 Organos, 13s.
25 Panuicilio, £3¼.
30 Polberro.
100 Plumas Eureka, 16s. 6
100 Port Phillip, 2s. 9d.
20 Quebrada, £3.
10 Roman Gravels, £3¼.
25 Richmond, £3½.
60 Ruby, 6s. 6d.
75 South Caradon, 9s. 6d.
5 Trevaunance.
100 Transvaal, 12s.
20 Untd. Mexican, £3¼.
100 Victoria Gold, 13s.
15 West Kitty, £8¾.
10 Wh. Grenville, £6¼.
5 West Frances.
100 Wheal Crebor, 21s. 9d.
75 West Godolphin, 18s 6

Where prices are not inserted offers may be made.

*** The present is a most favourable opportunity for investing in SOUND MINING SECURITIES, a judicious purchase of which at the low prices now ruling will, in all probability, result in large profits within the next few months.

Mr. BUMPUS devotes SPECIAL ATTENTION to LEGITIMATE MINES, and is in a position to afford reliable information and advice to intending investors and others in the selection of Shares either for INVESTMENT or SPECULATION. Correspondence invited.
ESTABLISHED 1867.

MR. CHARLES THOMAS,
MINING AGENT AND ENGINEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING ENGINEER, AND STOCK AND SHARE DEALER,
10, COLEMAN STREET, LONDON, E.C.

ESTABLISHED 1852.
MR. HENRY J. TALLENTIRE,
STOCK BROKER AND MINING SHARE DEALER.
SPECIAL DEALINGS in BALKIS, LISBON-BERLYN, MYSORE, TRANSVAAL and INDIAN Mines.
SHARES CAN BE SECURED for payment in one, two, or three months upon deposit of 20 per cent.
OFFICES—21, THREADNEEDLE STREET, LONDON, E.C.
BANKERS: CITY BANK, Threadneedle-street, E.C.

MR E. J. BARTLETT, STOCK AND SHARE DEALER,
30, GREAT ST. HELENS, LONDON, E.C.
Selected List of Investments post free on application.

MR. J. GRANT MACLEAN,
SHAREBROKER AND IRONBROKER, STIRLING, N.B.
Refers to his Share Market Report on page 66 of to-day's Journal.

JOHN B. REYNOLDS,
STOCK AND SHARE DEALER,
37, WALBROOK, LONDON, E.C.
ESTABLISHED 25 YEARS.
BANKERS: LONDON JOINT-STOCK, Princes-street, E.C.
POLBERRO.
Mr. REYNOLDS will give 41s. per share net cash for any part of 500 Shares.
TREVAUNANCE.
Mr. REYNOLDS is also a buyer of any part of 500 shares herein.
Mr. REYNOLDS again recommends the purchase of these securities.
Also, he advises the purchase of WEST POLBREENS.

THOS. ELS AND CO., STOCK AND SHARE DEALERS,
6, BOND COURT, WALBROOK, LONDON, E.C.
Business transacted in all Stock Exchange Securities, Foreign Stocks, Railways, Mines, and Miscellaneous Shares.
THOS. ELS and Co. have Special Business in the following Mine Shares —

100 Balkis, 4s. 3d.
50 California, 6s. 6d.
150 Colombian Hyd., 13s.
50 Colorado, £2 8s. 3d.
50 Home Mines, 17s.
50 La Plata, 5s. 3d.
100 Lisbon-Berlyn, 14s.
30 Mysore Gold, 20s.
100 North Tolima, 19s.
100 Organos, 11s. 6d.
50 Orita, 27s. 6d.
20 Oscar, 17s.
20 Schwab's Gully, £5¾.
50 Victoria, 12s. 9d.
100 West Phœnix, 3s. 6d.

THOS. ELS and Co. have large orders both as buyers and sellers of Organos and Orita shares, and are in a position to do business on the best terms. They have also special business in Schwab's Gully and Colorado.
Our January Circular touching upon Mines in the United States of Colombia, including Colombian Hydraulic, Organos, Orita, Tolima, and North Tolima, Mines in the Transvaal, including Lisbon and Berlyn and Balkis, and upon Indian Gold Mines, including Mysore, &c., &c., is now ready; post free on application.

STOCKS AND SHARES.
JOHN LENN AND CO.'S CIRCULAR, POST FREE, contains Highest, Lowest, Latest Prices of all Stocks and Shares, also shows the return per cent. at a glance.
JOHN LENN AND CO.'S CIRCULAR, POST FREE. The advice given in their former Circulars has enabled investors to make from 50 to 150 per cent. in a week.
JOHN LENN AND CO.'S CIRCULAR, POST FREE, contains special information respecting the safest investments obtainable, paying from 5 to 12½ per cent.
JOHN LENN AND CO. (LIMITED), BANKERS, AND STOCK AND SHARE DEALERS, 4 AND 5, GROCERS' HALL COURT, LONDON, E.C.

PROFITABLE INVESTMENTS.
Our SPECIAL CIRCULAR for JANUARY, now ready, contains particulars of several selections, paying from 5 to 10 per cent., in the safest and best-paying class of Securities, viz.:—
TRUST, MORTGAGE, AND INVESTMENT COMPANIES
ABBOTT, PAGE, AND CO.,
STOCKBROKERS,
42, POULTRY, LONDON, E.C.

MINERS' SAFETY-LAMPS.

FIG. 1.

FIG. 2.

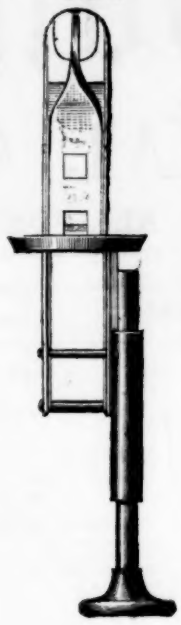


FIG. 5.

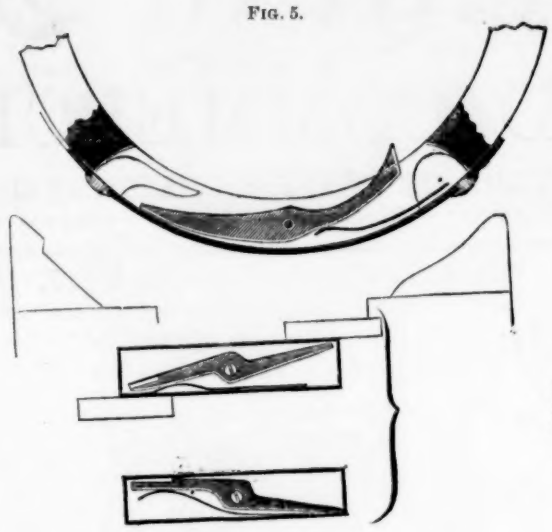


FIG. 4.

FIG. 7.

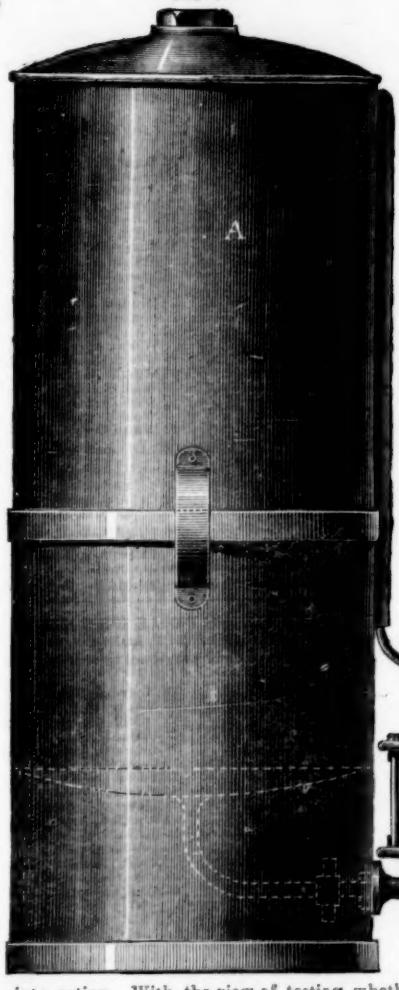


FIG. 3.

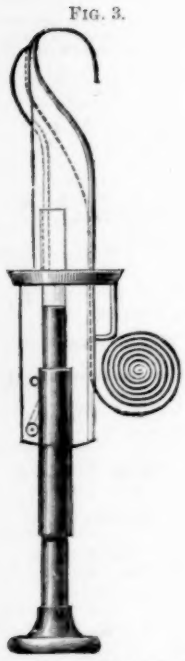
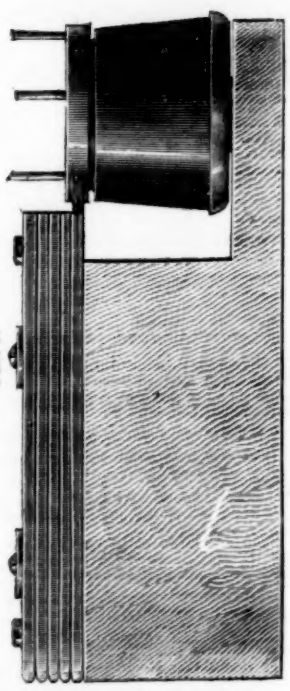


FIG. 6.



MANCHESTER GEOLOGICAL SOCIETY.

MINERS' SAFETY-LAMPS.

The meeting of members, on Jan. 9, held in the Lecture Hall of the Mining School, at Wigan (the chair being occupied by Mr. W. S. BARRATT, the President of the South-West Lancashire Coal Owners' Association), was entirely devoted to the discussion of questions connected with miners' safety-lamps, and the Chairman, in opening the proceedings, said there was no subject in connection with mine engineering that was at present receiving, or deserved, more attention.

A paper giving the results of experimental trials made with an automatic safety-lamp, of which a description was given in our report of the previous Manchester meeting of the society, was then read by Mr. J. S. BURROWS, and he also added some notes on the various methods of locking safety-lamps. In the course of his paper Mr. Burrows said Mr. Martin, Inspector of Mines, the energetic hon. sec. of the society, having forwarded to him for trial a lamp sent by Mr. C. E. Rhodes, had asked him to lay the results of such trial before the members. This he did with great pleasure, only regretting that he had not more information to give. The lamp might be briefly described as an ordinary Clanny lamp, fitted with an extinguisher capable of closing when down the inlet and outlet air-holes of the lamp, this again being enclosed by an outer shield, similar to that of the Marsaut lamp. When in use the "extinguisher" was propped up by a piece of iron passing up through a hollow standard. The bottom of this piece of iron was formed into a kind of hook, which rested on a piece of thread. The theory of this arrangement was that whenever the lamp was filled with gas the thread should burn, releasing the upright piece of iron or prop, and allowing the "extinguisher" to drop, thus cutting off all communication with the outside air, which of course would put out the light. It was needless to point out the advantages of being able to use a Clanny lamp when working, because it gave a good light, was much less liable to go out if tilted on one side than a Mueseler, and if the "extinguisher" really did its duty in the presence of a dangerous quantity of gas, it was equally as safe, if not safer, than the best lamp known. Unfortunately, he was unable to say definitely from experience that the extinguisher did so come into play when the lamp was placed in a current of gas and air, as he had only been able to watch the behaviour of the lamp in out-of-the-way workings, where gas could be found, and where there was no current. The lamp was first tried with an ordinary gas jet on the surface, but the thread would not burn unless the lamp was so placed that the gas entered on the side where the thread was, but by so placing it the extinguisher was brought into play and the light put out. On trying the lamp underground in gas it went out just as any other lamp would do, but the thread was in no case burnt. In all the trials underground the gas was but little, if any, diluted with air, and it was his opinion that if the gas were sufficiently diluted with air so as to burn briskly inside the lamp, the thread would burn and allow the extinguisher to come into action. With the view of testing whether the thread would break in ordinary use, when not required, the lamp was given to colliers and drawers instead of their own lamp. They were very pleased with the lamp after their own Mueselers, and the thread did not give way in a single instance. If, however, the lamp should prove to be so sensitive in a current of air and gas it was an open question whether it was an unmixed benefit to be left in the dark when a lamp met with, perhaps, only a small quantity of gas, such as when a longwall fall was "weighting," or when "prop drawing." Much attention had of late years been given to the question of safety-lamps; but he had not noticed much said about the proper method of securing or locking the lamps when lighted, so as to prevent the flame being exposed either by accident or design. As this was a very important part of the question he ventured to take that opportunity of bringing the subject forward. The devices for preventing the opening of safety-lamps when at work were:—1. The screw-lock when a short screw was tightened (a) against the threads on the lamp bottom, or (b) against the lamp bottom below the threads, or (c) from underneath through the lamp bottom and against the bottom ring of the lamp top.—2. A hasp attached to the lamp top passed over a projection on the bottom, and was secured by a common brass padlock and key.—3. The magnetic lock, as in the Wolf lamp, when the lamp bottom had to be placed over a powerful magnet before the lock bolt could be released to allow of the lamp being unscrewed.—4. The Protector Lamp and Lighting Company's patent, where, on attempting to unscrew the lamp bottom, the wick tube and flame had to pass through a collar held in its place by a simple arrangement with a spring, and which thus extinguished the light. There was a second locking arrangement, with a lead rivet as well.—5. Lead rivets, either (a) with an ordinary hasp, or (b) where two projections on the lamp, top and bottom, were brought opposite to one another, and the rivet passed vertically through them. In either case the rivets were pressed between two dies, which marked each end of the rivet with some device or initials. With regard to screw locks, they gave no security whatever. Any screw had always a tendency to slacken when there was any jolting or vibration. Again, if in locking the end of the screw, instead of locking in its usual hole, was just on the edge, the first knock the lamp received in working probably caused the screw to slip off the edge into its proper place, when it was slack at once. Moreover, the head of the screw lock on which the key fitted wore away rapidly, and it soon became difficult to screw it up properly. Lastly, anyone could open the lamp with a key, a nail, and even if the lock projected, with his teeth, and screw it up again in the same manner, the screw giving no indication that it had been tampered with. With regard to padlocks they were of the commonest kind, and duplicate keys were easily obtainable. They also told no tales when they had been tampered with. He had never seen the magnetic lock in actual use, but he thought it was a satisfactory means of securing the lamp. The Protector Lamp Company's arrangement was certain to extinguish the light when the bottom was unscrewed, if the spring were pushed home, and in its place, but a match would relight the lamp, and were it not for the second lock, with the lead rivet, would not show that it had been so treated. The lessening of the flame was effected by partially unscrewing the bottom, and in carrying the lamp the bottom had a trick of coming unscrewed until stopped by the second lock. The system of securing by lead rivets was not open to any of these objections. The rivets were stamped in the morning, before the lamps were given out, and remained just as they were unless the head was cut off. The person who defaced the rivet could not replace it unless he possessed a new rivet, and a fac-simile of the particular die in use, and the knowledge that when the lamp was handed in to the lamp room it would tell its own tale was sufficient to deter anyone from meddling with it. At the lamp stations for relighting lamps underground this locking, or, rather, stamping arrangement, was kept in a lock-up box, the key of which was in the possession of the jigger, or other person appointed, and who was the only person allowed to relight the lamps. Of the two plans he preferred the one where the rivet was placed vertically through two projections on the top and bottom, as there was then sufficient play in the hasp to allow of the bottom dropping down in case the thread on the lamp bottom was much worn. This question of securing lamps was very important, on two grounds:—1. It was no use having a perfect lamp in use if the light could be exposed by anyone without much difficulty or fear of detection.—2. Managers were exceedingly strict in enforcing the rules as to lamps, which was as it should be; but, on the other hand, they ought to be as particular in seeing that the means of securing the lamps were such as to leave no manner of doubt that they might, as he had tried to show, with screw locks, come loose without any interference on the part of the workman. Contracts to be binding must be mutual, and it was the duty of all concerned, whilst enforcing the rules to the utmost, to take care that it was not possible for an innocent workman to be sent to prison through having an antiquated and unreliable method of locking lamps. In conclusion, Mr. Burrows expressed the opinion that the question of lamps and locking would never be satisfactorily settled so long as the men were made to find and clean their own lamps. He believed this bad system was dying out, but there were many places where it was still in force. A man who was required to find a Davy lamp in one colliery must, perhaps, find a Mueseler if he moved to the next colliery, and possibly keep two or three other sorts if he wished to extend his movements, and it was only natural that he would buy the cheapest and, therefore, the worst he could. Also he would put off renewing the gauzes as long as they would pass the foreman's cursory inspection when he went to his work. Moreover it was not easy to make a change of lamps when the men had to find the money for a new lamp, in the choice of which they had no voice, and which might possibly be of no use if they left or were dismissed a fortnight afterwards.

Mr. WM. BRYHAM, in proposing a vote of thanks to Mr. Burrows for his paper, said the subject was one of very great importance, and they were very much indebted to Mr. Burrows for the manner in which he had brought it forward.

Mr. TONGE, in seconding the proposition, said he fully agreed with what Mr. Burrows had said, that the best system which could be adopted with regard to lamps, irrespective of any particular form or design, or manner of locking, was that all the lamps should be found by the colliery proprietors; when they had to be found by the men, it led to very defective lamps being used.

The vote of thanks having been unanimously passed, the CHAIRMAN expressed the opinion that it was very essential that subjects such as had been dealt with in the paper should be brought before a society like that.

Mr. BUDENBERG (Messrs. Schaffer and Budenberg, Manchester) next exhibited and explained the Wolf patent safety-lamp, with the special arrangement for automatic re-lighting without opening the lamp, magnetic locking arrangement and apparatus for charging and testing the lamps, several illustrations of which we are enabled to give. The Wolf lamp is constructed to burn benzine, and is illustrated in Fig. 1.

For the use of benzine in these lamps the following advantages are claimed as compared with oil:—It will give a much clearer light of more uniform intensity; it does not produce any lampblack or soot to clog the parts of the lamp; and by reason of its cleanliness a much finer gauze can be employed than is generally used in oil lamps, which considerably increases the safety of the lamp from firedamp; it is also perfectly adapted to denote the presence of firedamp, since when the latter increases to a dangerous extent the lamp goes out, whilst in the case of so-called "black-damp" the benzine flame will burn long after an oil lamp would have gone out for want of oxygen. A further advantage in the use of benzine is that it is much cheaper than oil. The novel lighting arrangement of the lamp is illustrated full size in figures 2 and 3. By simply inserting into the lamp a priming or percussion strap which is exploded by the action of a spring operated from outside the lamp, it can be relit about 75 times without reopening, and in the event of the lamp being extinguished from accidental causes the miner is not compelled to travel back to the lamp station.

While this arrangement removes the temptation for any malicious reopening of the lamp, a locking contrivance is provided, which renders it impossible for the miner to open the lamp except by means of a powerful special magnet kept at the lamp stores for the purpose. Fig. 4 represents a locking device of an older and somewhat modified construction, located in a case or shell attached to the screw ring of the lamp, and Fig. 5 shows the latest and best arrangement which is inserted between the two parts of the screwed portion in such a manner that no damage or clogging of the parts is possible.

The magnet to be used in opening the lamp is shown in Fig. 6. To effect the opening of the lamp it is placed upon the moveable brass disc attached to the wooden stand. Then the name plate of german-silver applied to the lamp is turned towards the magnet, so that its right hand part may lie in the recess of the magnet. It will then suffice to turn the base of the lamp somewhat to the left, and hold the top part of the lamp with the left hand, so as to unscrew the lamp by further turning it to the right.

For charging the lamps with benzine a very ingenious apparatus has been arranged, which is shown in Fig. 7, and which effects the filling of the lamps in an economical manner, without risk of danger.

The illustration above may be described as follows:—(A) is a reservoir of a cylindrical shape, and capable of containing 50 lbs. of benzine. It is provided at the top with a screw cover, which upon the apparatus being filled is tightly closed. On one side, at the lower end, there is a cock surmounted by a glass vessel. This cock has three ways; by turning the key upwards the glass vessel (B) is filled with benzine, sufficient to charge one lamp, so that it may be used during one shift. If, therefore, the open cup of the lamp be placed under the outlet of the cock, and the key of the latter be turned into a horizontal position, the cup of the lamp will only receive that portion of the benzine which is contained in the cylindrical vessel, while the benzine contained in the main reservoir remains separate. It sometimes, however, so happens that the benzine in a lamp is not fully consumed within a given time, so that the whole of the contents of the glass vessel cannot be held in the cup of the lamp. To meet such an emergency the filling apparatus is so arranged as to automatically stop the filling operation upon the lamp being sufficiently fed with oil without any necessity of shutting the cock by hand, so that there can be no overflow or excessive filling. Mr. Budenbeg also exhibited an apparatus for efficiently testing each lamp before it is handed to the miner. This consists of an apparatus for generating gas, which is passed into a testing cylinder, made of sheet-iron, provided with a glass, and containing a pipe, extending upwards in a serpentine shape, and provided within its coils with small apertures. The cylinder also contains orifices or slots at its lower end for the admission of atmospheric air, which can be regulated by means of moveable metal rings. When the lamp is to be tested it is on being lit inserted within the coiled pipe in the cylinder and the gases are allowed to reach the lamp through the small holes in the coiled pipe. Should the lamp be defective the gases will ignite within the cylinder, while if the lamp is in a proper condition the flame of the lamp will be extinguished in consequence of the inflow

of gas, or manifest the same phenomena as are observed with fire-damp, if only small quantities of gas are admitted into the cylinder. It may be added that at the final trials for the recent Ellis Lever competition at the Aldwark Main Colliery, near Rotherham, the Wolf lamp stood the test of a velocity of 51 ft. per second; in no case was the glass of the lamp broken, and it was remarked that the flame proved exceedingly steady, the clearness of the light being generally noticed. The lamp was not in competition, but the inventors claim that with the tests it passed through, although the prize was not awarded to any lamp, the Wolf lamp fairly met the stringent requirements which were imposed by Mr. Ellis Lever.

In the discussion which followed Mr. WM. BRYHAM expressed the opinion that it was not always advisable to give the men too ready a means of re-lighting their lamps should they have gone out in a highly explosive atmosphere.

The CHAIRMAN said he was sure the lamps which had been exhibited had been a source of great interest, and the SECRETARY informed him that a future opportunity of going further into the matter would be afforded under probably more favourable conditions for testing the lamps than had been possible on that occasion.

Mr. WINSTANLEY observed that the lamp shown by Mr. Burrows was no doubt a very ingenious arrangement, but it was a question how long a collier would be justified in remaining in an explosive atmosphere before the thread was burnt through; whether the collier would be justified in waiting until he was left in total darkness by the accumulation of sufficient ignited gas in the lamp to burn through the thread.

Mr. BURROWS replied that one of the chief objects of the lamp was th atunder no circumstances could there be any mistake, whether the man was waiting, or whether in fright he ran away and left the lamp behind him. In either case it would be extinguished.

Mr. MARTIN, Inspector of Mines, said he had seen the lamp tested at the Aldwark Main Colliery in a velocity of 51 ft. per second. The lamp remained burning for a few seconds and was then extinguished. The extinguishing arrangement had nothing to do with how long a man should remain in his working place in an explosive atmosphere, there were rules which regulated that; the object was that in the case of a person unwittingly getting into an explosive atmosphere the lamp would extinguish itself. With regard to the question of locking lamps, they were all indebted to Mr. Burrows for bringing the matter forward. During the last few months the subject had come frequently under his notice, and he found numbers of lamps locked with a screw in the hands of colliers after they had worn quite loose. The question, therefore, was how far it was desirable to have a lamp of such a description placed in the hands of men subject to penalties for unlocking. The locking of the lamp itself had no doubt nothing to do with its actual safety. The object in the first instance was that the men should be unable to unlock it without being detected; secondly, that it should not be unlocked inadvertently; and, thirdly, that it should not become unlocked without the action of the collier himself. Mr. Burrows had also made a remark that it was an unsatisfactory system which compelled the men to find their own lamps, and in this he agreed.

Mr. W. PICKARD (miners agent) asked whether in such lamps as the Marsaut and others, where a shield was introduced, this had not the effect of increasing the temperature of the lamp.

Mr. BURROWS said that at their collieries they had 300 of such lamps in use, and the men raised no objection with regard to the heat. He had not found any higher temperature in lamps with the shield as compared with those without.

Mr. W. PICKARD said that personally he had a strong objection to the shield, on the ground that it tended largely to increase the heat in the lamp.

Mr. MARTIN said that he did not in his experience when carrying a lamp with a shield find that it got exceptionally hot.

Mr. PICKARD said this might not be the case in carrying a lamp; but it would be very different in a stopping place.

Mr. HALL (Inspector of Mines), in answer to a question, said that with regard to the point raised as to whether the lamps should be found by the mineowners or by the men, both systems were practised, but personally he thought there could be no doubt that there could be no better plan than that the owners should provide the lamps.

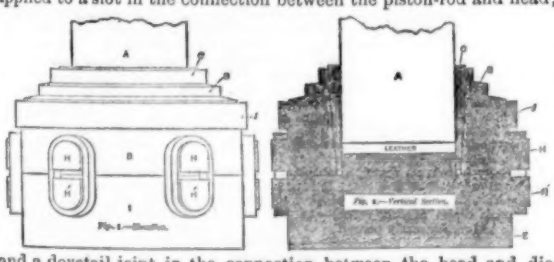
Mr. PICKARD said he quite endorsed the remarks which had been made on this point. He should like to see the day when every colliery proprietor would feel it his duty to find all the lamps used in his mine. Many of the men had not the proper appliances for cleaning and preparing their lamps, and it was not right that a large body of men in a pit should be made liable to the possible indifference of one man. If every lamp was provided by the colliery and handed to the men when they went down properly cleaned and prepared this would greatly conduce to the safe working of mines.

The CHAIRMAN said that as a colliery owner he entirely agreed with what Mr. Pickard had said. It was almost an obvious necessity that every colliery should find their own lamps. They then had a uniformity which could not be secured when men bought their own lamps, and there was no doubt that a considerable element of danger was introduced into a mine when men found their own lamps. At their own collieries they had provided lamps for the men, and he thought they had been repaid in the knowledge of the greater security thus ensured. It also stood to reason that the colliery proprietor in purchasing lamps for use in his mine would get the best he could find, which could scarcely be said to be the case where a collier had to provide his own lamp.

The proceedings were then brought to a close.

STAMP HEADS AND DIES.

Some improvements in fixing hammer heads, and which it is claimed would be equally applicable to stamps heads, are just now attracting attention in the United States. In the ordinary construction of steam hammers the head and die are usually secured to the piston-rod, which is slightly tapering at the end, by means of keys applied to a slot in the connection between the piston-rod and head,



and a dovetail joint in the connection between the head and die. The objection to this and all other modes of connection is that the unequal expansion and contraction of both the head and die continually knock the keys loose, no matter how tight they may be driven, necessitating the frequent stoppages to tighten up, which are sufficiently annoying in themselves, even if they do not lead to more serious consequences, such as the bursting of a head or cracking of a die, and, although these parts are generally made of cast steel, such events are not of uncommon occurrence, especially in shingling, where foul blows are frequent. The following description of a device applied a few years ago to a Sellers hammer in the works of the Trenton Iron Company, given by Mr. Wm. Hewitt, in a paper read at the last November meeting of the American Society of Mechanical Engineers, will, therefore, no doubt, be read with a good deal of interest. The arrangement is not only cheap, but appears to be much more satisfactory, having effectually overcome the difficulties mentioned. Referring to the accompanying sketches (Figs. 1 and 2), A is the piston-rod; B, the head secured to the lower extremity of the piston-rod by means of a tapering split ring, C, and a circumscribing wrought-iron band, J. E is the die. H H are a series of lugs projecting radially from the exterior face of the lowermost portion of the head and H' H' are a corresponding series of lugs projecting similarly from the exterior face of the uppermost portion of the die. The two series of lugs in the set of the parts are so disposed as to be vertically aligned in corresponding pairs.

The parts are joined in the following manner:—The wrought-iron band J is first shrunk upon the head B, to keep it from fracturing, and the head, with the band shrunk upon it, is then heated to a red heat. The tapering sleeve or ring C, which is split like a piston-ring, is now slipped over the end of the piston-rod; the head B, while red-hot, placed around this, and the die placed so that the lugs on it come directly opposite those on the head. The tapering ring C is then driven down tightly with a sledge, the head left to cool, and, finally, the bands shrunk around the lugs, as shown in the sketches. The opposing faces of the lugs are faced off or beveled so that they do not touch in the contact of the die with the head, in order to provide against the possibility of their receiving or sustaining any portion of the shock from the blows of the hammer, which otherwise would break or distroy them. The bands around the lugs, in shrinking, are, of course, subjected to an enormous tension, which retains them fixedly in position and holds the die immoveably in place until it is worn out, when it is removed by cutting the bands and replaced by a new die. The head B, on cooling, shrinks sufficiently, as practice has proved, to prevent the tapering ring C from slipping or shaking loose. A leather washer is placed between the end of the piston-rod and die, to provide for a slight amount of elasticity and ameliorate somewhat the force of the severe blows. The tendency of the blows, it is obvious, is to drive the tapering ring in tighter, and the force thus exerted outwardly against the head is so great that it would soon break it if it were not for the wrought-iron band J, which effectually prevents this. The head and die are made of cast-iron.

The London and Lancashire Fire Insurance Company announce that Mr. Richard Cornelius, of Richard Cornelius and Co., Liverpool, has joined the board of that company in Liverpool.

MINING COMPANIES REGISTERED IN 1884.

BY EDWARD ASHMEAD, F.C.A.

(THE NINTH ANNUAL TABLE OF A SIMILAR NATURE.)

BRITISH.—METALLIFEROUS MINES.

Title.	Situation.	No of shares.	Per share.	Nominal capital.
Abergele Copper and Silver Ore.	Denbigh	50,000	£ 1	£ 50,000
Barrow Mining	Cumberland	25,000	1	25,000
Bodmin Tin	Cornwall	15,000	1	15,000
Burnhope Lead Mining	Durham	10,000	1	10,000
Cambrian Mining	Cardigan	50,000	2	100,000
Cheshire Copper Mine	Cheshire	20,000	1	20,000
Connaught Copper Mining	Mayo	640	5	3,200
Craven Moor United Lead	York	32,007	1	32,007
D'Eresby Mining	Carnarvon	12,000	1	12,000
Dufton Fell Lead Ore and Barytes	Westmoreland	10,000	1	10,000
Great West Shepherds	Cornwall	50,000	1	50,000
Grogwinion Consolidated Mines	Cardigan	21,500	1	21,500
Gwennap Tin and Copper Mine.	Cornwall	40,000	1	40,000
Holywell District Lead	Flint	15,000	1	15,000
Hony United Mining Club	Cornwall	100,000	1	100,000
Liverpool Syndicate	Isle of Man	10,000	1	10,000
Newlands Vale Silver-Lead	—	6,000	1	6,000
New Brookwood Syndicate	Devon	6,000	1	6,000
New Roman Gravels Boundary.	Shropshire	60,000	1	60,000
North Devon Mining	Devon	20,000	1	20,000
North Rose	Cornwall	35,000	1	35,000
North Shepherds	ditto	50,000	1	50,000
Rowleyburn Lead Mining	Northumberland	10,000	1	10,000
Sheldon Mining	Derby	2,000	1	2,000
Snaefell Silver-Lead and Blende	Isle of Man	—	—	25,000
South Berchaven Mining	Ireland	2,500	10	25,000
Standard Lead Mine	Carnarvon	30,000	1	30,000
Treore Antimony Mining and Smelting	Cornwall	10,000	1	10,000
Van Mine	Montgomery	30,000	½	15,000
Total				£307,707

COAL AND IRON.

Birkby Coal and Brick	Cumberland	1,200	10	12,000
Burradon and Coxlodge Coal	Northumberland	3,000	50	150,000
Cardiff Rhondda Colliery	Glamorgan	1,500	100	150,000
Close Lane Coal and Fire-Clay	Lancashire	12,000	1	12,000
Corrwg-Rhondda Colliery	Glamorgan	1,200	50	60,000
Cowpen Coal	Northumberland	3,990	100	399,000
Crane Iron, Steel, and Coal	Glamorgan	10,000	10	100,000
Davies, Scott, and Co.	ditto	4,000	100	400,000
Dinas Steam Colliery	Wales	750	100	75,000
Ffaldau Colliery	Glamorgan	1,600	50	80,000
Fforchneol Merthyr Colliery	South Wales	50,000	1	50,000
Frizington Mining	Lancashire	300	100	30,000
Grassmoor	Derbyshire	200,00	10	200,000
Great Western (Forest of Dean) Collieries	Gloucestershire	600	50	30,000
Greenside Coal and Wortley Fire-Clay	Yorkshire	2,000	5	10,000
Gower Iron and Tin-Plate	Glamorgan	400	50	20,000
Hall and Boardman	Derbyshire	6,000	5	30,000
Hetton Coal	Northumberland	1,260	350	441,000
James Evens and Co.	Glamorgan	250	100	25,000
John Lancaster and Co.	Monmouth	10,000	20	200,000
Knutton Manor Mining	Staffordshire	6,400	10	64,000
Landshipping Minerals Estate Syndicate	Pembroke	1,000	10	10,000
Llong Cannel	Flint	1,000	10	10,000
Llynwyndu Graigola Colliery and Brick	Glamorgan	400	10	4,000
Lydney and Crump Meadow Collieries	Monmouth	400	50	20,000
Machen Iron and Tin-Plate	ditto	10,000	5	50,000
Nant-y-Glo Colliery	ditto	120	100	12,000
Neath Abbey and Dyffryn Estates Colliery	Glamorgan	12,000	10	120,000
Nelson Colliery	South Wales	1,000	10	10,000
New Llantwit Coal	Glamorgan	1,000	10	10,000
New Victoria Colliery	Staffordshire	25,000	1	25,000
Ousby Mining	Cumberland	1,000	10	10,000
Rhondda and Swansea Colliery	Glamorgan	100,000	1	100,000
Riddings' Colliery	Staffordshire	400	5	2,000
Robert Plant	ditto	7,500	1	7,500
Rochdale Borough Colliery	Lancashire	1,000	10	10,000
St. Helen's Coal and Clay	Flint	16,000	1¼	20,000
Samuel Scowcroft and Sons	Lancashire	5,000	10	50,000
Skinner and Holford	Yorkshire	10,000	10	100,000
Stretton Lansdale Colliery	Derbyshire	1,200	5	6,000
Thomas and Evans	Glamorgan	500	20	10,000
Wemyss Mine	Wales	7,500	2	15,000
Wenallt Merthyr Colliery	Glamorgan	120	50	6,000
West Leigh Colliery	Lancashire	500	100	50,000
Ystalyfera	Glamorgan	5,000	20	100,000
Total				£3,295,500

SLATE AND STONE.

Cardigan Slate Quarries	Cardigan	1,000	10	10,000
Carnarvon Green Slate	Carnarvon	2,500	10	25,000
Conway Silica	ditto	500	10	5,000
Glynrhonwy Slate Quarry	Wales	25,000	1	25,000
Plascanol Slate and Slab Quarry	Merioneth	3,000	5	15,000
Quarella Stone Quarries	Glamorgan	25,000	½ 1	25,000
Stone Working and Quarry Company, Portland	Dorset	750	20	15,000
Wern Slate Quarries	—	100,000	1	100,000
Wrysgan Slate Quarry	Merioneth	2,500	10	25,000
Total				£245,000

FOREIGN.—EUROPE.

Anglo-French Marble	France	200,000	1	200,000
Anglo-Sardinian Land, Mining, and Timber	Sardinia	50,000	1	50,000
Cervantes Silver Mines	Spain	300,000	1	300,000
Corsican Copper and Chemical	Corsica	12,500	2	25,000
Drobie Mines	France	25,000	4	100,000
Hungarian Gold and Silver Mines Syndicate	Hungary	1,200	10	12,000
Iron Gate Coal and Chrome	ditto	100,000	1	100,000
Kongsberg Consolidated Silver	Norway	120,000	1	120,000
Kristior (Hungary) Gold and Silver Mining and Smelting Syndicate	Hungary	50,000	1	50,000
Norwegian Marble	Norway	2,500	10	25,000
Ripanji Mining	Servia	1,500	10	15,000
Societe Generale des Carrieres des Gres	France & Belgium	2,250	20	45,000
Spanish Hydraulic Gold	Spain	75,000	1	75,000
Villaricos Silver-Lead Mining and Smelting	ditto	12,000	5	60,000
Total				£1,177,000

ASIA.

Glenrock	India	200,000	1	200,000
New Mysore Gold	ditto	100,000	1	100,000
New So.-East Wynaad Estates	ditto	100,000	1	100,000
Total				£400,000

AFRICA.

Title.	Situation.	No. of shares.	Per share.	Nominal capital.
Central African Gold Exploring Expedition	Central Africa	10,000	1	10,000
Graskop Company No. 2	Transvaal	20,000	1	20,000
Graskop No. 3	ditto	20,000	1	20,000
Hatton Company	Griqualand West	1,500	10	15,000
Pilgrims' Rest "Extension" (Transvaal) Gold Fields	Transvaal	150,000	1	150,000
Tibagy Dredging (Gold and Diamond)	Africa	400	50	20,000
Transvaal Copper and Mineral	Lydenburg	400,000	1	400,000
Transvaal Land Investment and Gold	Transvaal	300,000	1	300,000
United Diamond Mining Company, Old De Beer's Mine	Griqualand West.	4,500	10	45,000
Total				£980,000

NORTH AMERICA.

Anglo-American Mining	—	20,000	10	200,000
"Bon Espoir" Gold	California	80,000	1	80,000
Bullion Mining	United States	220,000	1	220,000
Cincinnati Company	Colorado	3,000	20	60,000
Copper Queen	Arizona	100,000	5	500,000
Cornucopia and Secret Treasure Gold Mines	Nevada	60,000	1	60,000
Dayton Coal and Iron	Tennessee	2,500	100	250,000
Flora Gold Mine Syndicate	Colorado	1,200	10	12,000
Grand Barranca Copper	Mexico	300,000	1	300,000
Kelly Gold Placer	Montana	75,000	1	75,000
La Trinidad	Mexico	100,000	5	500,000
Mexican Mining	ditto	80,000	5	400,000
Mount Carbon	West Virginia	500	100	50,000
Nevada Consolidated Mines and Smelting	Nevada	100,000	1	100,000
New Hoover Hill Gold	North Carolina	120,000	½	60,000
New Last Chance Silver	Utah	100,000	1	100,000
North Mexican Silver	Mexico	200,000	1	200,000
North Montana	Montana	150,000	1	150,000
Pinos Altos (Mexico) Mining	Mexico	250,000	1	250,000
Russell Gold	North Carolina	300,000	1	300,000
Texas Guano	Texas	20,000	5	100,000
Utah	Utah	150,000	1	150,000
West May Lundy	California	200,000	5	1,000,000
Total				£5,117,000

SOUTH AMERICA.

Aculeo Company	Chili	105,000	1	105,000
British Guiana Gold Estates and Timber Syndicate	British Guiana	1,000	5	5,000
Cartago	Venezuela	300,000	1	300,000
English Company of San Miguel de Colquechaca	Bolivia	16,000	10	160,000
Lemhi-Argenta Gold Placer Consols	—	22,500	10	225,000
Monserratte Gold	Venezuela	125,000	1	125,000
New Chile Gold	ditto	500,000	1	500,000
New Potosi	ditto	300,000	1	300,000
North Pacific Guano Syndicate.	South America	1,200	10	13,000
North Tolima Silver Mines	Colombia	60,000	1	60,000
Ouro Preto Gold Mines of Brazil	Brazil	80,000	5	400,000
Royal Silver Mines of Potosi, Bolivia	Bolivia	30,000 / 5,000	10 / 50	550,000
Total				£2,742,000

AUSTRALIA.

Aladdin Mines	Queensland	1,600	10	16,000
Frederick's Valley Gold	Australia	4,000	10	40,000
Queensland Collieries	Queensland	12,000	1	12,000
Tarrangower Australian Gold	Victoria	120,000	1	120,000
Total				£188,000

SUMMARY.

BRITISH.

29	Metalliferous Mines	£ 307,707
45	Coal and Iron	3,295,500
9	Quarries, Slate, and Stone	245,000
83	Total	£4,348,207

FOREIGN.

54	Metalliferous Mines	£9,534,000
11	Miscellaneous	1,070,000
65	Total	£10,604,000

Grand total, 148 companies, nominal capital..... £14,952,207

THE GOLD FIELDS OF NORTHERN SPAIN.

BY ONE WHO HAS EXPLORED THEM.

While the world is being ransacked for gold from the wild regions of California, Australia, and New Zealand, to the fever-stricken jungles of Western, and the arid plains of Central, Africa, and the tropical heights of Hindoostan, it is strange that vast gold fields nearer home, and within two or three days of London and Paris, should be neglected. The rich gold fields of Leon, Asturias, and Galicia, in the north-west of Spain, were not only well known, but were extensively worked in the time of the Roman occupation of the Peninsula; and their workings are fully described by Pliny, in his Natural History (Book 33). Pliny himself resided in the district for some years, having been appointed Roman Procurator in Spain, and there is to this day a village in the province of Leon called after him. The returns of gold obtained by the Romans from one district alone are described by him as exceeding 20,000 lbs. weight per annum, and the remains of their workings are still conspicuous over a large tract of country, affording undeniable evidence of the enormous scale upon which the operation of gold washing was carried on. The Americans boast of their extensive working by means of the hydraulic system, as shown by the vast expanse of surface ground washed away in the State of California. Great, however, as their operations, aided by the scientific application of hydraulic power, have been, they are surpassed by the enormous washings of the ancient Romans, who, it must be remembered, had no such mechanical appliances. The Romans, of course, did not work so rapidly as is now done in America (in some places at the rate of 5000 tons per day); but it is very certain that they worked more carefully than the Americans do, for it is shown by carefully testing the debris left by them, that they extracted almost the ultimate particle of gold by their process; whereas the American system recovers from the gravel an average of only about one-third of the gold contained.

It is proved by the remains of the old workings, plainly visible in many parts of northern Spain, that the Roman miners worked in a very systematic way. They brought the various rivers and rivulets, by means of leats and culverts on to the mines, and they caused the powerful streams of water to pass over the golden gravel, conveying it through cleverly constructed sluices. The large boulders and quartz pebbles of which millions of tons are still to be seen neatly piled up on the hill sides in Leon and Galicia, they undoubtedly removed by hand labour, and then allowed the finer sand, surcharged with gold, to settle in suitable tanks, from which they afterwards separated the fine gold, either by some, at present unknown, chemical process, or by simple subsidence. Some of the canals, the remains of which still exist, were of great length. At Las Medulas, in Leon, where the works are on the grandest scale, the water was brought 75 kilometres along the sides and over the tops of mountains. On the face of the gravel bed, which is at this place 850 ft. deep (more than twice the height of St. Paul's Cathedral) the spectacle is perfectly wonderful, isolated pinnacles like pyramids, or monoliths of gravel rising to 400 ft., have been left standing in bold relief out from the adjacent mountain side, and no verbal description can convey an adequate idea of the grandeur of the spectacle; it must be seen to be properly appreciated. Many visitors from America and elsewhere who have seen these gigantic works, declare that nothing so wonderful can be seen in any other gold field in the world. Pliny states that the Romans employed 60,000 men (mostly slaves) in these gold regions, and the annual yield of the precious metal was something altogether beyond calculation according to the then current value of money. It is further stated that the Spanish gold fields were far more than 300 years the chief source of supply to the Roman Empire. In fact, there is abundant evidence that up to the end of the Roman occupation the workings were in full activity, but suddenly the Goths invaded the country, drove out the Romans, and from that day the mines have been comparatively neglected, except that at times when the country was not disturbed by the almost incessant wars, many of the natives washed for gold in the rivers, with good results.

Owing, however, to the thin population such washing was only

carried on when the rivers were low, and no thoroughly scientific working with modern appliances has yet been attempted. In fact, it is only since the opening up of this extremely rich and hitherto deserted territory by the new line of railway, giving direct communication between the important ports of Coruna and Vigo with Madrid, that attention has been directed to the wealth that has lain neglected in the sands for nearly 2000 years. During the construction of this line the gold deposits attracted the attention of many engineers and capitalists, and surveys and experiments were undertaken on a large scale, in order to prove whether the gold in the alluvial gravel and quartz veins could be profitably worked. So satisfactory were these experiments that one company has already erected sluicing machinery, and is, it is said, getting good returns.

The appearance of the gravel is exactly like ordinary yellow gravel, but instead of being full of flints, it is full of quartz pebbles, schist, and magnetic iron. The yield of gold, as proved by extensive trials and numerous assays, varies from a few grains to 2 dwts. and upwards per ton. Some of the mineral nearest the bed rock gives much higher results, in some cases as much as 4*l.* worth of gold per cubic yard of gravel It is said that in the American gravel mines 6d. per ton, and in some places even less pays remarkably well, as the cost of working with hydraulic power, by means of the latest improved monitors, or little giants, averages only 2d. per ton. It is estimated by the experts who have examined and tested the Spanish gravel beds that the yield of gold will average 3 pesetas, or 2s. 6d., per ton. In addition to the gravel beds, which vary from a few feet to 850 ft. in thickness, there are enormous beds of auriferous conglomerates and quartz lodes, all of which have been extensively worked.

The extent of country which is known to be auriferous, measures several thousand square miles, and is chiefly land of little agricultural value. Of course the whole of this is not equally rich, or workable for gold. For example, some of the richest deposits are on the summits of mountains, where no water can be brought to work them, but as a rule, rich beds are found in the valleys that can be easily worked by hydraulic power. The water supply is unlimited. There can be but one opinion—that this vast region will yield an immense supply of gold, much as it did for the Romans. They have not abstracted one-tenth of the available deposits. When compared with other regions, it is quite as rich as any in California, Africa, Australia, or India, though not quite so virgin as some of those regions, and it possesses one great advantage that all the rest lack—being easily accessible. By the opening of the new line of railway through Galicia, Leon, and Asturias (which literally intersects the gold region), it can be reached in three days from London.

Meetings of Public Companies.

CHILLINGTON IRON COMPANY.

An extraordinary meeting of shareholders was held at Wolverhampton on Monday to consider the advisability of winding-up the company by voluntary liquidation,—Mr. G. J. BARKER in the chair.

The notice convening the meeting having been read,

The CHAIRMAN said the anticipations expressed at the last meeting that with a good harvest they might experience an improvement in trade, for which they had so long waited, had not been realised. The depression had made itself more marked during the past year. Throughout the 12 months business had been gloomy; prices had further given way, and serious losses must have been the result. In nearly all the iron districts throughout the country works had been put to stand. A very small reduction of 2½ per cent. had taken place in the wages of the ironworkers, but that was out of all proportion to the reduction in the prices of iron. In Shropshire some of the men had consented to a further reduction which had enabled the works to be carried on. During the year the company had had to contend against increased railway rates, and against a prolonged colliers' strike. A reasonable concession in railway rates would have been an important aid in enabling the board to carry on the works, but all efforts to secure such reduction had failed. In all branches of trade there had been very severe competition, and the company had been much undersold. The lease of the galvanising works in Liverpool expired in a short time, and the directors had disposed of their interest in that department. They did not consider it desirable to renew the lease, as they were unable to compete as to the prices of black sheets with the makers in Lancashire, South Wales, and other districts. Every possible expense had been reduced, and unremunerative parts of works had been entirely closed. But this very course, so desirable in itself, had tended to an increase in the general charges for those portions of the works which had been kept going. When the board had ascertained that the losses in the past nine months had been of a much more serious amount than in the preceding year, amounting to something like 11,000*l.*, and further, that prices were still falling, and that prospects were more gloomy than ever, the board determined not to begin working in the new year without first consulting the shareholders.

Mr. GREGSON said that round about Liverpool the galvanisers seemed to be doing well, and he thought that they had parted with one of their best properties.

The CHAIRMAN stated that the reason the galvanising works were disposed of was because the lease was expiring very shortly, and the directors did not think it advisable to enter into another lease for another 10 years. The directors had not been able to get out a statement of accounts up to the present. The business had not been carried on so actively as the year before.

Mr. J. ANNAN said as there was no statement of accounts before them he would move that a committee of three shareholders be appointed to confer with the directors and have one drawn up to be submitted to an adjourned meeting.—Mr. LAND seconded the proposition.

Mr. BANKS, in supporting the motion, said that at the last annual meeting a committee of investigation was proposed, He was sorry that that motion was not passed. If it had been the present loss of 11,000*l.* might possibly have been prevented. It was not explained at the former meeting that the mortgage then agreed to was to be a bill of sale, given to one of the directors, who retired to allow of his acceptance of it. If the directors had then informed the meeting that Mr. Hickman was to be the mortgagee, the meeting would have pressed for the committee of investigation. The shareholders had trusted the directors for nine years, and they had done nothing but lose their money.

The CHAIRMAN said that he did not think that the directors could accept the investigation committee. He thought that there should be a liquidator. The directors could recommend no course but liquidation.

Mr. ANNAN said that as heavy bills were to be met on the morrow he found that his motion could not be passed.

Mr. LANGLEY (solicitor) said that he considered it most important that liquidation should be resolved upon that day.

The CHAIRMAN, in reply to further questions, that it was well known throughout the whole of the district to whom the bill of sale had been granted, and for what amount. The total, so far as he could make out, of the secured debts of the company was 50,000*l.*, and the unsecured debts 10,000*l.*

Mr. ALFRED HICKMAN said that before the last general meeting was held the company owed, as they had done for a considerable period, a very large sum to their bankers. Their bankers had been pressing them for payment, and that pressure became at last so strong that it was necessary to deal with it in some way or other, or at once go into liquidation. The directors were casting about to find money, and they applied to him. He consented to make an advance sufficient to pay off the bank debt, and to give them funds to carry on the business further at 5 per cent. Before taking steps in connection with the negociation he resigned his seat on the board. He stipulated that before the transaction was carried out, and before any final steps were taken in relation to it, that the shareholders should be consulted, and at the last general meeting it was decided without dissent that the loan should be accepted. With regard to the remarks made concerning his dealings with the company it should be known that any one buying pig-iron, and not being in a position to buy from his (Mr. Hickman's) furnaces, would be placed at a great disadvantage. He was the maker of one-third of the whole produce of the district of the particular kind of pig which the Chillington Company purchased. If they had been precluded from dealing with him they would have been shut out from one-third of their market. The negociations for the purchase of pigs between himself and the company was carried on by the Messrs. Barker, who held one-fourth of the whole property of the company. It was scarcely to be supposed that men in their position would not make a fair bargain on behalf of themselves and the other shareholders. And it was not to be supposed that a gentlemen who was a proprietor of only some 2500*l.* worth nominally of shares in the company would have from his position as director any undue influence upon the Messrs. Barker in the making of those contracts. He had done his best to support the company, and if the directors had seen their way to go on and to struggle further, he should have been willing to make a further advance to enable them to do so.

The CHAIRMAN said that the whole of the property of the company was covered by the bill of sale. He would strongly urge upon the shareholders—of whom he was by far the largest—to accept a liquidation. The directors would agree to the appointment of shareholders to help them. He begged to move that the company be wound-up voluntarily, and he suggested three names to be the shareholders' committee——Mr. DANIEL JONES seconded the proposition.

Mr. GIBSON urged that as Mr. Hickman had security over all there was no property in the possession of the company. The liquidators would have no legal power until after the appointment that day was confirmed by an extraordinary meeting. No security was, therefore, to be got from the passing of the resolution which the Chairman had proposed. The directors said—"We have nothing to disclose." Why then, he asked, did the directors object to the appointing of a committee of investigation, whose report might fully establish the claim of the directors that everything had been done fairly and above board? After the committee had reported it would be time enough to appoint liquidators.

Mr. LANGLEY, replying to Mr. GIBSON, pointed out that if the meeting were adjourned it would give the creditors time to issue executions against the company, whereas if the motion for liquidation were passed that day it would b impossible. The motion that day would not really put the company into liquidation. It would not enter into liquidation until the passing of the confirmatory resolution.

The CHAIRMAN stated that if his motion were passed he should be prepared to propose from the chair that a committee be appointed to consult with the liquidator.

Mr. MOLINEAUX said that his feeling was that as the directors had brought the concern to its present position the best course was to wind-up; but he believed also in inspection. He was rather surprised that the directors should have let it come to this before the shareholders were called together. He was the more surprised at it since one of the directors was going about saying that he was aiming at keeping the trade in the district. It did not look much like keeping the trade in the district when matters were brought to such a pass that works employing nearly 300 workpeople had to be closed. Such protestations by the director in question were the more open to debate when he remembered that that gentleman had been connected with another company which some time ago was in a similar fix.

Mr. HICKMAN, assuming that he was the person referred to by Mr. MOLINEAUX, begged to say that his connection with John Bagnall and Sons began on the day of the proposition to liquidate when they wanted fresh capital. To keep the trade in the district he subscribed for one-half of the money needed to restart the concern. During the six months after the reorganisation which that subscription made practicable the concern was carried on at a profit; but it was then found that the directors had no power to issue the capital. His connection with John Bagnall and Co. was simply that of a subscriber of capital needed to carry on the concern. With reference to the Chillington Company, which a gentleman suggested he had brought into its present position, he joined it at a late period of its existence, after the principal part of its difficulties had occurred, and after the edge-tool branch had been established. For some time he was a director, and did his best to support the other members of the board in carrying on the concern in the best interests of the shareholders, and at a critical moment he came forward with money to carry the concern on. Having done this he left the management to persons of more ability than himself. When more recently he was consulted upon the position of the company he consented, if it should be deemed desirable, to make a further advance. But the directors, considering the losses they were making, the competition they had to face, the small probable demand, and the generally unfavourable prospects of trade, determined not accept his offer.

The CHAIRMAN now submitted that the company be wound-up voluntarily, which was carried. He then proposed that Messrs. Bartleet, Annan, and W. Edwards should be appointed a committee to act with the liquidator.——The motion was seconded, and carried.

Messrs. BANKS and PATERSON expressed their dissatisfaction that the nomination of the committee should have proceeded from the chair, the latter remarking that the affair would now be entirely in the hands of the directors.

A vote of thanks to the Chairman terminated the proceedings.

ST. JOHN DEL REY MINING COMPANY.

An extraordinary general meeting of shareholders was held at the offices of the company, Finsbury Pavement, on Thursday,

Mr. JOHN HOCKIN in the chair.

The notice convening the meeting having been read, and the minutes of the previous meeting confirmed,

The CHAIRMAN proposed that the following resolution passed at the last meeting be confirmed:—

That the regulations of the company be altered by substituting for the present regulation, numbered 58, the following regulation:—"There shall be two auditors who shall be appointed at the first ordinary meeting in every year. One of such auditors shall be a shareholder (but not a director) of the company holding not less than 400*l.* stock, and the other of such auditors shall be a professional accountant, or a firm or a member of a firm of professional accountants in the City of London, but neither of such auditors shall be interested otherwise than as a shareholder in any transaction of the company."

The motion having been seconded, was put to the meeting and carried.

The CHAIRMAN then said that that was all the business, but Mr. Illingworth, who had lately come from the mine, was present, and would be happy to give them some information concerning this property.

Mr. ILLINGWORTH stated that during his visit to the mines, which had extended over a period of three months, he had, of course, observed a great deal. He conceived his duty to be of two parts—the one as concerned his position as a director of the company, and the other to gather all the information he could of the place. In general he was satisfied that the property was in a prosperous condition. The mine was showing increased improvement day by day. The worst part was in the assays, and, in fact, there was some disappointment that the assays were not better than they were. They all knew that the mine was not what it was as regards riches. They were opening up on the north branch, where they were meeting with arsenical pyrites, and it was well-known that where there was arsenical pyrites there was gold. The eastern reserves were looking exceedingly well, and he considered this a most interesting part. There were two stopes in it, both yielding good mineral, and they might expect considerable returns. The point which strikes one most is the exceedingly orderly way in which the mine was being developed by Capt. Rogers, especially as regards the way in which he carried down the timber. He referred to the exceedingly disorderly way the timbering had been done previously, and said that Capt. Rogers was placing the timber at regular distances apart, and altogether in regular order. Timber was being saved by so doing, and not only that but some of the old timber was being used again, as many as 70 logs were utilised last year, and this year Capt. Rogers expected to use about 100 of the old logs. He (Mr. Illingworth) assured them that the mine was in good hands, and showed every prospect of improving in auriferous properties. The great question was how to increase the output, and he thought the difficulty was one of labour more than anything else. Beyond that he did not think that there was anything to give them anxiety, or to cause them any worry of mind. Referring to their reduction works, he said it was only fair to say at once that it was on the surface that they failed. They ought to get out more gold, and he believed that with greater care and more machinery and stamps they could get it. He referred to the great quantity of gold lost through not being able to bring it to the mercury, and thought they might make some improvement in this respect without very great expense. Speaking of the new hauling-wheel he said it had been set to work and was working satisfactorily, and was, he considered, a good sound piece of work. He remarked that now instead of pulling the pit about every time they wanted to let down timber they could use the hauling machine and the other shaft. It also was of great assistance in the removal of a large amount of debris that had accumulated below to the depth of some feet, and which increased the strain on the timber. This was no small matter, but one of great importance. During the last two years all the machinery had been put in good order from a state at any rate not satisfactoy. He explained the reason why the completion of the hauling and water-wheel had been so long delayed, by stating that when it was estimated that three months would be sufficient for it it was understood that a gang of men would be put on it straightaway, and continue at it till done. Such was not the case, however, and the men were being constantly taken off for some other more important work. The old pumping-wheel had almost been entirely reconstructed, and had been so repaired as to give hopes of it lasting for some years longer. With regard to their new mine—Cuiaba—they had all been expecting to get returns, but h e thought they had been too sanguine about the time required for developing it. They could not say what the size of the lode there was, but it was a large one, and their difficulty would be to know how to work it. He explained that they had not found the lode at the extreme west angle at the deep adit, but it was absurd to suppose that such a large lode was lost. It had either gone to the east or the west, and they were going to try for it west first. Speaking of the lode itself he said it increased in assay value, and also in apparent value. It would not be before two years that they would have developed it so as to say what its future worth would be. Having spoken of the advisability of erecting here retreatment machinery, he concluded by saying that as a result of his visit he had great confidence in the mines.

Mr. MACKENZIE proposed a vote of thanks to the Chairman and board, which having been seconded by Mr. DRIVER, was carried, and the proceedings terminated.

RAILWAY RATES.

A conference of traders and representatives of Chambers of Commerce was held at the City Terminus Hotel, on Wednesday, to consider what action should be taken in consequence of the Private Bill notices which had been given by certain railway companies to alter their maximum rate,—Lord HENNIKER in the chair.

The CHAIRMAN stated that, in discussing the question at issue, they should entirely put aside all party politics; all they wished to do was to induce the companies—and to get the Government to help them in that object—to do what was fair to trade, wise for the companies themselves. Having said that the question was no new one, and having reviewed the history of it, he went on to say, that Mr. Chamberlain's Bill of last year had this advantage—that it dealt with the Railway Commission, but it had one or two objectionable points, some of which were treated in the Bills they had met to discuss. The most objectionable point, he thought, was the proposal that in future the maximum rates, instead of including terminals, &c., were not to include these charges. He held that this would be very dangerous, and that they should persist in knowing as far as they could what they had to pay. He could not help believing that the policy of the railway companies were very short-sighted. The railways depended on the prosperity of the country, which in turn depended on the facilities of those engaged in trade and agriculture. A ton of corn coming from abroad would be taken from the Victoria Docks to Peterborough, 76 miles, for 6s. 8d., including barging and every charge; while the ordinary charge from London for the same distance for English corn would be 14s. 5d.

Mr. BARCLAY, M.P., in moving the first resolution, said cheap transportation was one of the essential elements for the prosperity of the country, and in these times of keen competition the cost of transport was a very important item in the cost of production. The cost of transporting goods by steamships had during the last 10 or 15 years decreased by some 25 or 50 per cent.; and they had cheap locomotion in the form of tramways and by other means. The railway companies, however, seemed to think that they were unable to reduce the cost of transport, notwithstanding the enormous decrease in the cost of the materials used by them, and the further fact that if they wanted money they could borrow it for about 25 per cent. less than they could 10 or 15 years ago. They did not complain of the companies charging the low rates which they did for conveying foreign produce, but they did maintain that if they could carry the produce of foreigners at such low rates, they were bound to do as much for their own countrymen. Instead of that, in the bills which they had promoted they now proposed to charge higher rates. They did not want to charge increased rates to the foreigner, because these charges were within the maximum rates, so that the intention was evidently to charge higher rates to the home producer, and to increase still more the differences at present existing. He contended that it was the duty of the State to exercise an effective control over that monopoly which the State had conferred on the railway companies, and to see that the privileges were not abused. If the proposed bills became law this would give them an idea of what the result would be:—The present maximum rates (he was dealing with three of the companies) for carrying coal a distance of 20 miles varied from 1s. 8d. to 2s. 6d. a ton, whereas under the new arrangements the maximum rate would be 2s. 6d. plus the new charge for terminals. The maximum charge for carrying coal 60 miles varied from 3s. 3d. to 5s. a ton; while the new rates would vary from 5s. to 5s. 5d., exclusive of the terminals. For a distance of 100 miles the present maximum rates for carrying a ton of coal varied from 6s. 3d. to 8s. 4d., and under the new system they would vary from 6s. 3d. to 7s. 4d., plus the terminal charges. They were unable to say what the increase would really be, because they did not know what the terminal charges would be. Altogether he regarded the proposal of the Bills as absurd. If they became law—which he did not for a moment contemplate—incalculable damage would be done to all trades and interests in the kingdom. He believed the policy which the railway companies had adopted of diverting traffic from its natural channels—the sea or canals—on to their lines had been most unfortunate for the country; and the same system had also been adopted by the companies among themselves in diverting traffic from shorter to longer railway routes. They had it in evidence by a distinguished official of the Board of Trade that such a policy was for the benefit of the public, but he (the speaker) maintained that the public never derived benefit from wasted labour. He believed that in opposing these Bills—which they must unhesitatingly determine to do—they would be doing a benefit to the railway companies, who, under a more enlightened economic system, might find themselves able to economise, and that instead of asking for higher rates they would be able to reduce their charges in a good many cases. He concluded by moving that "Whereas the proposed Bills increase in numerous cases the maximum rates on merchandise, and add to the maximum rates new and undefined charges for so-called 'station terminals,' necessitating thereby litigation before the legal rates chargeable for the carriage of goods can be ascertained; and whereas the professed uniformity of classification of goods does not compensate for the detriment caused by the other provisions of the Bills; and whereas the Bills introduce provisions prejudicial to the owners of private sidings, and enable the companies still further to increase their differential rates in favour of foreign producers; and whereas the proceeding by private Bills exposes the traders to vast expense in protecting their rights, and at the same time leaves it opent o the companies to withdraw the Bills from the consideration of Parliament at any time they see fit; this Conference therefore resolve to oppose the Bills in Parliament, and urges traders without delay to call the attention of their representatives in Parliament to the obnoxious character of the proposed Bills, and urge them to vote against them."

Major CRAIGIE seconded the motion. He stated that traders and agriculturists were at the present time in no position to listen to any proposals, however specious and plausible, which involved an increase in the rates of carriage. They must endeavour in their various localities to stir up public opinion on the subject, and resolve to oppose the Bills in question as a matter of principle.

Mr. RITCHIE, M.P., held that even if the proposed Bills did not affect traders—which they did—they ought to assist in resisting every effort to impose any fresh burdens on the agricultural interests. He was satisfied that the House of Commons would not listen to the proposals contained in the Bills.

Mr. HUNTER RODWELL looked upon the matter as a great national struggle, and an attempt on the part of the companies to break the bargain they had made with the public. The question involved was entirely one of principle, and from his knowledge of committees, he was sure they would fritter away their chances, which he believed were great of successfully opposing the Bills.

The CHAIRMAN said a few words summing up the discussion, and afterwards put the motion, which was carried unanimously.

Mr. PLATT moved the next resolution, to the effect that a copy of the foregoing resolution be forwarded to the President of the Board of Trade, with a respectful request that he will take the earliest opportunity of stating the views of the Government respecting the Bills in question.

Mr. DUNCAN seconded the motion, which was carried.

A vote of thanks to the Chairman closed the proceedings.

MANCHESTER ASSOCIATION OF EMPLOYERS AND FOREMEN.

A meeting of members was held at the Technical School, Manchester, on Jan. 10, when Mr. W. H. BAILEY, the newly-elected President, delivered his inaugural address. The special subject was the reign of law in relation to the unification of engineering knowledge, and he proceeded to say that the reign of law was imperial in the domain of the engineer who has to deal with forces having definite fixed values. If he perceived a quantity or force he knew that he could identify the same measure or quantity of the like whenever he met with its equivalent under equal conditions. They knew that chance did not rule, and if there was a condition that was indefinite or obscure to them it was not because there was no law, but because they were ignorant of its records. In the address given by Sir John Lubbock at the York meeting of the British Association, he alluded to the eminent services which Sir Joseph Whitworth rendered to the engineers of this country and to mankind by the introduction of standards of measurement. These standards have all the value of law, and may be called for our purpose arbitrary law. Having referred to the advances that had been made during the last 20 years in the utilisation of heat from coal for the creation of energy, he said probably the greatest achievements in the proper—that is to say, the scientific, use of coal, of heat, of energy, during a recent period, may be observed in producing iron and steel. The immediate difference in the consumption of coal by the introduction of the hot-blast in the year 1830 doubled the production of iron, or, in other words, saved half the coal, and since that time the production of iron by the hot-blast furnaces has been quadrupled. Again, we find that by Sir Henry Bessemer's brilliant discovery, due to his exact knowledge of chemical conditions—by his direct method of producing steel, and followed as he has been by other scientific men in this direction—we find as a net result of the simplification of the processes observed in the manufacture of iron and steel that during the 12 years ending 1882 there was a saving of coal to this country of 12,000,000 tons per annum. Having spoken of the methods of arriving at truth as being assisted by scientific instruments, he went on to say that often the acquirement of knowledge had been impeded by the imperfection of the methods employed. Weighing and measuring, valuing with precision, calculating the work done, counting the forces at our disposal, analysing the chemical constituents, and considering the different materials of construction and their relation to each other, all these things require knowledge of the truthful—that is to say, the scientific use of instruments. He stated that it was impossible to allude to the numerous workers who had conferred the greatest benefits on engineers by the refined and scientific use of instruments in the investigation of forces, but mention might be made of Mr. David Kirkaldy and Mr. Daniel Adamson. He also spoke of the work of Professor Thurston. Speaking of the use of the 2 ft. rule he said—A few years ago some of the leading engineers of Manchester were fully convinced that it would be for the benefit of the engineering community if the metrical system were introduced into our workshops. Great pains were taken with the object of abolishing the 2 ft. rule, with its inches, and eighths, and sixteenths, and thirty-seconds. Sir Joseph Whitworth, the late Mr. Charles Byer, Sir William Fairbairn, and others began a movement for substituting this French system of measurements, with its metres, and centimetres, and millimetres, but custom proved too strong, and there has been a gradual return to the 2 ft. rule. Indeed, the 2 ft. rule was never disestablished except in one or two workshops for a short time. The other day I was discussing the matter with the manager at an ironworks in this district, and he laughingly showed me an order which he had just received for some bars of iron ¾ and ⅛, and a 1-32nd inch in diameter. If this had been ordered under the metrical system it would have been simply 21½ millimetres. The opposition to the introduction of this metrical system was a matter of surprise to him, as he always considered the introduction of the system into the country would be of infinite benefit.

Having referred to the progress made during the last 20 years in the mechanical use of energy, to a great extent owing to the discovery of Dr. Joule, he went on to say that with regard to the future trade of the country, he had no fear of it, and concluded by saying the steam-engine, the electric telegraph, and the Suez Canal have broken down the great barriers which formerly divided mankind. Cotton is cheaper in Manchester than it is in New York. If I require a special piece of thin steel, or any special material from Geneva or Paris, I am able to purchase it as cheaply as the citizens of either of those places. These conditions, with the skill of the men in this district, enable us to produce our manufacture, and without fear of any producers in the world. A great deal has been said of late as to the cost of carriage, and much must be demanded by those engaged in the heavy engineering trades who know the co-efficient of cost of carrying goods to the sea. Engineers know exactly the percentage—that is to say, the proportion of cost in carrying 100*l.* worth of goods of different classes 100 miles by horses on roads, locomotives on railways, by canal barges, or steamboats on rivers and on the sea. It is to be hoped that the consummation of the Manchester Ship Canal will place the manufacturers of this great district within easy reach of our coast.—At the conclusion of the address a vote of thanks was unanimously passed.

BLUE HILLS.—At the meeting held on the mine on Jan. 9 (Mr. J. C. Daubuz in the chair) the accounts, showing a loss of 834*l.* 9s. 9d. on the 16 weeks and a balance of 1931*l.* 11s. 5d. against the adventurers, were presented and allowed. A call of 5s. per share was made. The labour costs amounted to 988*l.* and merchants' bills to 382*l.* The tin sold, 14 tons, yielded 582*l.* The agent's report stated that the 66 was extended 10 fathoms east of the rise, or 95 fathoms from Letcher's shaft; the lode had been of good average width, and yielded saving work for the stamps, with good stones of tin occasionally intermixed; but a small cross-course had just been intersected which had cut off the lode. They hoped however to cut it again to the east of the cross-course in a few days. The rise in the back of the 66 was up 11 fathoms; the lode had been displaced by a lode having a contrary dip. They had had to drive south in order to intersect the main tin lode, and it was considered that they had 6 ft. further to drive. They had enlarged the 50 from Letcher's shaft to the end eastward and had laid down a good tramway. There was a great extent of unexplored ground standing eastward, and it was considered that there were good chances of success if the levels were continued on the course of the lode into this unwrought ground. The pitwork was in good order and they were keeping the water from this mine and the Penhalls with one engine easily.

FOREIGN MINES.

ASIA MINOR.—W. H. Twelvetrees, J. W. Jones, F. Waschek, November Report: In the main adit level the rise was finished to the sole of level I. (Arthur's). In level I. (Arthur's) the winze is in ore ground, worth 1¼ ton per fathom, and the total stopings worth 3 to 3½ tons per fathom. In level II. (Hamburg) the ore in cross-cut No. 2 is worth 2 tons per fm, and the total stopings are worth 2 to 2½ tons per fathom. In level III. the ends in winze No. 2 are worth 2½ to 3 tons per fathom, and the total stopings are worth 2½ to 2¾ tons per fathom. In Union level III. the value of the lode has increased to 2 to 2¾ tons per fm., and the total stopings are worth 2¾ to 2¾ tons per fathom. In level 4 (Savalan) the rise in lode is worth 2 to 2¾ tons per fathom; the total stopings are of the same value. In level V. (Durfeld) the rise in lode is worth 2¼ to 2¼ tons per fathom, and the total stopings 2¼ to 2¼ tons per fathom. In level 6 (Turfelda) the rise in lode is worth 2½ to 2¾ tons per fathom, the winze 1½ ton per fm., and the total stopings 2¼ to 3 tons per fathom. In level 8 (Genoese) the total stopings are worth 3 to 3½ tons per fathom. In level 9, driving on Kaya Bashi lode, the lode is worth 1¾ to 2 tons per fathom. Production in November was 229¼ tons in 24 working days from 42 stopes. Dressing-floors produced in 25 working days 160 tons dressed ore. The stock of ore at dressing-floors on Nov. 30 was 217 tons; 53 tons of ore were transported to Kerasunde, making a total of 1534½ tons since Jan. 1, against 1447 tons in the same period last year.

BARANCANNES.—Joseph Garland: Report for December: The engine-shaft was sunk last month 1 fm. 5 ft. 2 in., and divided and cased to bottom; ladderway completed, and sollar placed over the sump prior to starting the cross-cut. The total depth of shaft below the 24 is 10½ fms., and the cross-cut for a 34 fm. level was commenced on Nov. 29. We have to drive, we calculate, about 9 fms., and we hope to intersect the lode by the end of March. On reaching the lode we expect to be able to open out ground on its course rapidly, and if it turns out productive, as we anticipate it will, we shall soon have a good deal of stoping ground available. In No. 2 stope 20 metres of the vein were taken away in December, and in No. 3 stope 15·74 metres. The lode in the former is 4½ ft. wide, 2 ft. of which is a fine-looking leader of quartz, containing a good percentage of copper ore, and the lode in the latter, higher up towards the 13 fm. level, is 2½ ft. wide, yielding good pockets of ore.—P.S.: I forwarded you, per yesterday's post, a tracing, showing in sections of the mine the progress made in sinking, stoping, &c., during the year, and the state of the mine on Dec. 31.

CHONTALES.—Manager, Dec. 5: In the past month we have driven the level at San Antonio Mine 25 varas, but the ground has been harder than in the previous month, and the lode not yet producing quartz of sufficient value for the stamps. We have also rose here in the back 29 varas. I did hope to have made more progress, but was hindered by meeting with large rocks in the lode, and have had to use dynamite several days in the past month. The cost for November is 263*l.* 7s. 4d., and includes 43*l.* for timber, and 24*l.* for freights from San Ubaldo.

COLORADO UNITED.—A letter announcing the arrival of Major Reed in Colorado, and the following telegram were received at the company's office, on Thursday:—Been ill. Possession (mines) Monday. Arranging shipment (ore).

DEVALA MOYAR GOLD.—Manager, Dec. 22: The last crushing, of which I am advising you by wire, has yielded a little over 4 dwts. per ton. I have another lot now at the mill taken from the 300 ft. level, and it prospects well, but I shall not commence crushing it until after the short holiday which I intend to give the men at Christmas. The next crushing will be from the 200 ft. level, and then we will try one from the 140 ft. level, where we are also getting excellent prospects. The old tunnel has been driven 44 ft., the 140, 5 ft.; the 200, 3 ft.; cross drive in the 200, 4 ft.; 300, 4 ft. At Harewood reef the main tunnel has been driven 3 ft., and the cross drive 5 ft. In the latter we struck some good looking quartz two days ago, but I have not had time to test it.

— Telegram, Jan. 14: Crushed 85 tons of quartz from the 300 ft. level, which has yielded at the rate of 5 dwts. per ton.

DENVER GOLD.—Thomas Rickard, Jan. 1: I have to-day completed my examination of the mine and the company's business, and I am glad to say that in general things look very encouraging. It was high time to make the repairs to the engine, boilers, shaft, and buildings, for everything had been worked as long as it was possible without such repairs. With a few more improvements in details of the hoisting and pumping plant things will be in thorough repair, and will run for years without any particular outlay on this chapter. You will be glad to hear that one way and another the cost of working will be so reduced that instead of requiring $9·50 as formerly to pay cost, the limit will be reduced to $7·50. The new mill section will start next week, from which time 60 heads of stamps will be at work, and the mill will do good and cheap work. The stope ground has been greatly increased the last two or three months, and the milling average is now decidedly above the $7·50, or cost rate. My brother's hope, which I fully share, is that January will begin to show a decided profit with a fair prospect of maintaining it, and I think that the next few months will pay back the money lately expended in plant and repairs, and that by the end of June next there may be considerable balance at the bankers on this side. Other matters to which my attention was called upon coming out here have my attention, and shall be reported upon on my return. A very important point just now is the extension of the ore on the north vein towards and already almost into the Camp Grove section. Another is the opening of a new stope field on the main lode above the 550, quite realising the hopes I had long since entertained about this upper ground. Still, another point is the intersection of the north vein near the extreme west of the 900, where a cross cut has just now been completed. The lode at this place is good, and, moreover, it forms junction quite at the end of the 9·0 with the main lode, a fact which augurs well for a favourable result from the driving of a fresh cross-cut to the north vein at the 1200 lately started. On the whole, then, we are safe in taking a very favourable view of our operations during the new year, and, indeed, from the first day of the year. It is yet too early to get the cost for December, but the yield of gold being about 400 ozs., we anticipate a pretty fair showing.

EBERHARDT.—Drift No. 2 from 6000 ft. west has advanced 5 ft., total, 914 ft. Side drift to the left has advanced 6 ft., total, 16 ft. Raise No. 6, drift northerly, has advanced 10 ft., total, 20 ft. The face of the main drift has decidedly changed from a hard dead lime to rock of a livelier and better character. Stringers of white spar and also of black spar have come in, which promises to do better still by making into quartz and ore. Drift to the left on this main level continues without change. Our work in raise 6 is looking quite encouraging, showing considerable quartz. The indications are that we are on the same seam that carried the quartz and ore in the main level below. The quartz carries silver, and is of a highly promising character. Evidently there has been a disturbance in this section of ground, and I have hopes that as we get through or away from it better rock will come in.

INDIAN CONSOLIDATED GOLD.—Dec. 19: Grove's Section, No. 1—North Drive: This drive has been extended 8 ft., making a total of 109 ft. from the cross-cut; the lode in the end is about 5 ft. wide, the stone looks much better than it did at the time of my last report, it is a laminated quartz, and contains a fair percentage of pyrites. I have started men to cut a winze-plat about 20 ft. from the face of the drive, and will have to sink a winze so as to ventilate this part of the mine; it will be about 200 ft. from No. 3 winze, and I think that I will be able to get down without much water, as No. 2 north will draw it.—Shaft: The shaft has been sunk 4 ft., making a total of 46 ft. from surface. We have broken through to the rise over No. 3 winze, but it will take me a few weeks to square it down and timber it, I will then cut down No. 3 sink the same size as the shaft to No. 2 level.—No. 3 Winze: The air was very good till the north-east monsoon set in. I will push the new winze down with all possible speed; that will give us good air for several hundred feet driving north.—Underhand Stopes: I have got a few men employed timbering and filling up the ground that is worked out; they will finish in about a week.

Grove's Section, No. 2: The north drive has been extended 7 ft., making a total of 261 ft. from cross-cut. The lode is about 5 ft. wide and intermixed with country, but the stone looks much better than when I sent my last report; it contains a fair percentage of pyrites: it has not that hungry barren look that it had a few feet back.—No. 3 Winze: This winze has been sunk 7 ft., making a total of 14 ft. below the No. 2 level. The lode is about 3 ft. wide, and is a laminated quartz, and contains about 2 per cent. of pyrites; the progress is slow, but the native labour is very little good where there is water to contend with. I will have to put in hand pumps. I have got them all ready, so I think I will be able to manage the water for 100 ft.

No. 4 Winze: This winze has been sunk 10 ft., making a total of 22 ft. below No. 2 level; the lode is about 3 ft. wide, and looks better than it did when we started, it is running very flat, and we are not much bothered with water as yet. The hanging-wall is well defined, but the footwall is very irregular. It is my intention as soon as I get the plat cleared at No. 2 to keep the stone that we get in each winze, and drive separate, and have small crushings as we progress, so as to get at the value of the stone we are sinking and driving through from time to time, and I hope we will succeed in finding something that will repay us for all the outlay and anxiety.—Surface: Everything is in fair working order on the surface; we have only a few coolies employed about roads and making the plats larger at No. 2 Grove's; firewood and mining timber is being cut and delivered by contract.—Battery: We started to crush from Grove's No. 1 north drive on Nov. 18, and finished on Dec. 17. We were only able to work with ten heads, and that only for a few hours a day, which accounts for the length of time taken to complete this crushing. We crushed 437 tons for a total yield of 55 ozs. 18 dwts.; it is a slight improvement, but not good enough. I intend to try another small crushing from the same place.

Crushing between Nov. 18 and Dec. 17:—Grove's Section. No. 1, new make in north drive: Commenced 7 A.M. Nov. 18 with 20 heads, working full battery until 7 P.M. on Nov. 27, total 57 hours; from Nov. 21 to 7 P.M. on Dec. 17, with 10 heads, total 314 hours: total number of hours worked, 371. Constant stoppages from want of water. Number of trucks (each (4390 lbs.), 223. Total quantity of quartz crushed, 437 tons. Average velocity of stamps, 62 blows per minute. Quantity of dry concentrate sent to pans, 16 tons. Number of holes to the square inch in screens, 200.—Particulars of amalgam and retorted gold obtained. From copper plates, 76 ozs. 15 dwts. amalgam, 26 ozs. 4 dwts. retorted gold; from boxes, 11 ozs. 8 dwts. amalgam, 4 ozs. 14 dwts. retorted gold; from ripples retorted mercury, 4 ozs. 12 dwts. retorted gold; Wheeler's pans, 63 ozs. 10 dwts. amalgam, 16 ozs. retorted gold; Wheeler's pans, retorted mercury, 18 dwts.; Tyrolean mills retorted mercury, 3 oz. 10 dwts. retorted gold: total, 55 ozs. 18 dwts. retorted gold, or 2 dwts. 13·4 grs. per ton.

JAVALI.—G. E. Chambers, Dec. 5: The following is the report of the working for the month of November:—Mine: Pim's tunnel progressed 6½ varas. By taking part of the south wall, instead of all the lode, we have encountered easier ground, although both wall and lode are only to be driven by blasting. San Pablo's shaft went down 2 varas; to urge on this I have now placed foreign labour there, as once communicated this shaft with the approaching Pim's tunnel. I hope to gain good ventilation, and thus enable us to work at the end of Pim's tunnel, if possible, day and night, whereas now the men can only be there two-thirds of the day, to allow the fumes of dynamite to disperse; also I hope to form a stope under the old San Pedro, where good quartz was formed above. Dolores' stope was driven 5½ varas to the east. From Teodulo's shaft, No. 2, a level is being driven east towards the old Nispero: this progressed 8 varas. The quartz supply came from the following stopes:—San Pedro, No. 1, yielded 78; Seemann's, 279; Laken, 60; sinking, No. 1, 199; ditto, No. 2, 130; and new shaft, 72; south stopes, 1; Dolores, 124; Dolores surface, 22; Nispero, No. 1, 102; ditto, No. 2, 3; ditto, No. 3, 85; and Letrina surface, 67 tons, respectively. The Manto workings were:—San Pedrito yielded 30; Seemann's shaft, 126; and Concepcion, 220 tons, respectively.—Esperanza Mine: The tunnel here was driven only 2½ varas, the contractor being ill. I have this month placed another there.—Mills—La Fé: Owing to the difficulty with the pivot of the turbine, and the subsequent breaking of the vertical shaft (more fully explained elsewhere), the 30 stamps only worked 18 4-24 days, crushing 1173 tons of quartz, which yielded 288¼ ozs. of gold, making an average of 4 dwts. 17 grs. per ton. We have now welded and placed a new vertical shaft in the turbine, which up to date has worked well, and I hope to have a more successful month's run through December.

La Esperanza: The 12 stamps worked 20 days, crushing 430 tons of quartz, which yielded 114¾ ozs. of gold, showing an average of 5 dwts. 2 grs. per ton. The water for this mill coming as it does from La Fe when any stoppage is made above it is likewise felt here.—La Caridad: The two cups worked 20 days, and yielded 30 ozs. of gold. The total remittance consists of 433½ ozs. of gold, making a total average yield per ton of 5 dwts. 9 grs. Receipts and expenditure: The expenditure was 1011*l.*; the remittance is valued at 1030*l.* I hope next month to send you a more satisfactory remittance, as the quartz all round has the appearance of an improvement.

JAVALI.—Return for the month of November, 433½ ozs., being an average of 5 dwts. 9 grs. per ton of ore treated, valued at 1080*l.* Expenditure, 1011*l.* The stamps only worked 19 days, on account of stoppage of machinery.

KOHINOOR AND DONALDSON CONSOLIDATED.—A. Richard, Dec. 15: I have much pleasure in reporting a considerable improvement in the Champion Mine since writing you on Dec. 4. The lode in the shaft has gradually and steadily shown more ore, until at the depth attained to-day—55 ft. below the 600—there is fully 2½ ft. of fine mineral, and there is good reason to think that this is going to develope into a rich ore body. A characteristic feature in the mineral is an unusual abundance of galena, which leads me to think that it is a new thing entirely. The ore bodies in the east, which is opening out so well at the 520, and that of the west, are comparatively free from it, the predominant mineral in them being iron pyrites. The further development of this new ore body, for I cannot call it anything else, is a matter of great interest, and if it can possibly be carried on without interruption I would recommend and even press it. The 600 west has been cleared, and the drift advanced 6 ft. The lode is large, but as the drift is running on the hanging-wall portion we have only about 2 ft. of it, which will make milling material. Finding this at present is to my mind a reliable indication that the ore body, which by its dip is still ahead, will turn out here as well as ever it did in the upper levels.

The 600 east has been started, and we cannot fail to find ore shortly there, the 520 in the same direction being in a strong and good vein. In this direction we have we think a long range of good paying ground. If we may judge from the discoveries already made in the 520 east, the grade of the ore will be richer in gold here than westward. A sample of the vein in this drift yielded, for width of 2 ft., 1 oz. gold and 5 ozs. silver per ton. This being fairly free milling ore, the results on the plates will be good. The outlook is decidedly the better for these discoveries, and it is fair to state that the mine never gave greater promise of being a good success.

Dec. 23: I am glad to say that the cheering news which I had to communicate in my last respecting the Champion Mine has been fully borne out by developments since. The lode in the shaft is decidedly larger and richer, and our hopes that a new ore body has been found here seem to have better foundation as progress is being made. The shaft has fully 3 ft. of ore, and in every respect is looking first-rate; it will turn out fully 9 tons per fathom.

The 600 east shows quite an improvement; the lode has assumed a much better defined character, and a nice branch of ore, 3 in. wide, has appeared on the footwall, which we think will soon develope into something richer. The 600 west is opening out better ground as it gets further into the ore body, and the 520 east is still opening out good stoping ground. The vein is 2 ft. wide, all good milling material. It will be seen by these few remarks that the mine is opening up remarkably well in the deeper workings, and it should be a source of encouragement to all parties interested. It certainly gives us here great satisfaction.

— Manager, Jan. 10: Cablegram: The new milling works are expected to be completed by Jan. 20.

MONTANA.—Telegram from Manager: Return first week (?) 410 tons, yielding $9625.

MYSORE GOLD.—B. D. Plummer, Dec. 23: Mining Operations: There is nothing new to report from underground this week. The lode in the bottom of the mine is a very fine one, and if we had better miners I should be satisfied. Stamping will be continued for the first fortnight or three weeks in this month on low grade ore. Some of this is what accumulated on the bank before I came here, and some is ore we are breaking in the 173 on the east lode. The latter part of the month will be employed stamping the stone we shall get from the bottom of Taylor's workings, though it necessarily will be only a small quantity, but we will do our very best to get as much gold as possible. In wiring you the next result of our stamping, if I simply name the number of tons of quartz crushed and the ounces of gold obtained, as I have done previous to last month, it will do. You will understand that it includes a good deal of low ore. Last month, however, the case was so exceptional I considered it only right to telegraph you the details.

NEW HOOVER HILL GOLD.—Report for month of December: The work in connection with the pump for the Briol's shaft is being proceeded with. Sinking has been resumed in the bottom of the shaft, which will be deepened about 15 ft. before the cistern is put in. The north drift at 230 is in 44 ft.; the vein in the end is small, but carries good ore. The ore milled in December from this part of the mine was got in cutting down the south end of the Briol's shaft, above the 230, sinking below the 230, and from the north drift. We shall not be able to resume stoping on the main chimney or chute above the 230 for some time yet.—Hawkins': The orebody in the No. 1 stope is at present of small size, but the ore is of fairly good grade. In the No. 2 stope we are drifting on the ore body going off in the north-west end. The drift is now in 31 ft., having been in ore for all of this distance, which has milled on an average about $7 per ton. The ground is easy for breaking, but requires a good deal of timber. In the prospecting drift west at 135 ft. work has been carried on part of the time, and an advance of 5¼ ft. has been made without any change in the nature of the ground to report. The Provost shaft has been deepened 7 ft., and the ore in the bottom has fallen off in quality. We think the chimney or chute of ore has dipped away to the north of the shaft, and have started to drift in that direction.—Mill: The mill ran for 23½ days, crushing 450 tons of ore, which yielded 216 27 ozs. of gold.

NORTH MEXICAN SILVER.—Advices have been received that Mr. Ottokar Hofmann, the consulting metallurgist of the company, and Mr. Reinhardt, the millwright, of Chihuahua, have met at Chicago and prepared the plans and specifications for the company's mill, which have been forwarded to founders for tender, and that all the founders' work will leave the foundry by the middle of March. Meanwhile all necessary preparations are being made at the mines for the building to be ready for the reception of the machinery.

NEW POTOSI.—T. B. Provis, Dec. 6: With regard to the mine, there is not much change since my last letter. — Scriven's: The No. 2 level east has been driven 26 ft.; the lode still maintains its size—about 4 ft. wide. From this we have sent to the mill 64 tons of quartz, which have yielded over 2 ozs. of gold to the ton. On Dec. 1 set a contract to drive this level 60 ft. farther east, the level to be 8 ft. high, at $25 per ft. The men are working at it day and night, it being necessary to push this end so as to open our stopes inside the slide. We have not broken 1 ton of quartz in the bottom of the level. This is all standing, and is a valuable piece of ground, which can be worked at a good profit when the shaft is sunk. The stopes in the back of the level are being vigorously worked, but we have the same disadvantage as last advised (the slide continuing to fall at an angle quite as much as the stopes have advanced), thus preventing our putting but a limited number of men to break qnartz. From these stopes we have broken about 235 tons of quartz. The highest part is now 25 ft. from the back of the level, and I can see but little difference in the size or quality of the lode for the whole distance. The necessary timbering has had due attention in the stope and level, with railroad laid close to the end of the level. At the top of the shaft we have enlarged the dump platform, so as to hold all the quartz that may be hoisted during the night, thus saving the wages of two carmen.—Main Shaft: Having to cut our expenses as low as possible, very little is being done here; in fact, only about 200 ft. of vein has been excavated; it is slightly smaller, but the change is unimportant. A new tram station has been put in at entrance of the level from cross-cut and rails laid. In the shaft the timbermen have put in several pieces as stays, &c. This shaft is now in first rate order, being well timbered throughout.—Rock-Drills: I am pleased to report the entire completion of this part of our work. The air compressor has been tested, and works most satisfactorily. The air receiver and pipes are well fitted, and we expect no trouble whatever from these; in fact, nothing remains now but to give the order to start the men with the drills. All the machinery is in good working order. I have nothing to add beyond that everthing here is in capital working order, and the mine opening out most encouragingly.

ORITA GOLD.—W. S. Welton, Dec. 4: On Nov. 28 I turned the water into the main pipe. Mr. and Mrs. Oakes and Dixon were invited to see the result. Before quite reaching the alto the pressure was so great on one of the vacuum valves that the rubber seating blew out, and I had to turn off the water. Iron supporting plates had to be made for each of the valve seatings. On Nov. 29 I again turned on the water, when it went over the hill splendidly, reaching Orita in a few minutes after. The ditch was running in the flumes 2 ft. 6 in. deep, area 17½ square feet. Speed of water in ditch quite 3 1-5th ft. per second, giving a discharge of 2000 in. At first there was considerable leakage, but it soon became tight, and I think the present loss by leakage is not more than 3 per cent. On Dec. 1 a large piece of 1½ in. plank fell by accident into the bulkhead. This went beyond the Quebrada, and striking the pipe made a hole in the side. Of course, the water flowed out like a machine running, but no damage was done to the foundation of the pipe, and a few hours repaired the damage. This illustrates the advantage of a pipe over a ditch. In a pipe in case of a break the water is thrown so far away from the pipe that no damage is done to the foundation of the pipe. In a ditch the result of 2000 in. of water going over the side would be very great damage, and loss of time putting in flumes, &c. As there are many bends in the pipe I hardly expected that they would all stand firm under so much pressure. No more leakages, however, took place in any portion of the pipe. I am putting up machines at the mine, and expect to have them running on the gravel by about Christmas; 4000 ft. of pipe to mine is being laid.

PITANGUI GOLD.—A telegram from the agents in Rio, dated Jan. 12, states that the produce for December was 1000 oits. of gold, worth, at 8s. 6d. per oit., 425*l.*

RUBY AND DUNDERBERG CONSOLIDATED.—Dec. 21; Dunderberg shows a slight improvement at various points; 38 tons of ore shipped during the week, and 12 tributers at work.—Lord Byron: There is a slight improvement in the orebody at the bottom of the cave, west shaft; the present size of the orebody is about 6 by 4 ft. The orebody at bottom of No. 1 cave is looking well, and is producing about the usual quantity of good ore. The orebody at south branch of No. 1 cave is also improving in quantity and quality, the last shipment assaying $89·59 per ton. There is a fair prospect for ore in No. 2 cave. Have shipped 31 tons ore this week, and have 22 tributers at work.

— Telegram, Jan. 13: 55 tons ore shipped, and 93 tons smelted, producing to company $668.

RICHMOND CONSOLIDATED.—Telegram, Jan. 13: Week's run (one furnace) $13,000 from 274 tons of ore. Refinery $13,000.

UNITED MEXICAN.—Excess of returns over outlay on the mine of San Cayetano de la Orejera for the week ending Jan. 10 is $7000. Holiday.

SANTA BARBARA GOLD.—A telegram from Rio, dated Jan. 10, states that the produce for December was 3400 oits., worth at 8s. 6d. per oit., 1445*l.*

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, Jan. 11: Produce for the month of December 17,000 oits., value 6587*l.*; yield 3·4 oits. per ton.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. WM. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

THE COPPER TRADE.

Messrs. HARRINGTON, HORAN, and Co. (Liverpool, Jan. 15).—The year 1884 will for ever be remembered as a gloomy one. West Coast and most other produces have shown a depreciation in value which we believe was never experienced before, and the depression in trade generally has been most marked. Chili bar copper with but few oscillations gradually fell from 58*l.* 5s. in January, to 47*l.* 7s. 6d. in December, thus showing a fall of nearly 11*l.* per ton during the 12 months, and about 6*l.* per ton below the lowest price ever recorded in previous years—53*l.* in August, 1879. This decline has, no doubt, been influenced by the depression in other metals, notably iron, but in a great measure the market has been continually hampered by rumours of large shipments from the United States, and probabilities of considerable increased production there during 1885. Copper statistics indicate that the deliveries have been greater than the imports, and should the present low rate of values continue, consumption is more likely to increase, whilst production can hardly be expected to do so, it being well known that some of the principal mines are now working unremuneratively. We do not despair of an early revival in trade, and it may be that the year just opened will make amends for the disappointments of the past. When the improvement does come, copper is likely to be one of the first articles of commerce to attract the attention of investors. The highest point touched for spot Chili bars was 58*l.* 5s. in January, and the lowest, 47*l.* 7s. 6d., in December; further fluctuations will be seen in our figures below. The average price for the year was 54*l.* 9s. 1d., against 63*l.* 5s. 10d. in 1883; against 67*l.* 1s. 6d. in 1882; against 61*l.* 9s. 8d. in 1881, and 62*l.* 9s. 3d. in 1880. The lowest price touched for ores (including Peruvian), was 9s. 3d., and for regulus 10s. 3d., whilst the highest for ores was 11s. 9½., and for regulus 11s. 3d. per unit.

Chili copper charters for first part of this month are not yet to hand. A telegram just in, however, advises an advance in Valparaiso exchange to 27½d. During the past fortnight more activity manifested itself in the Chili bar market, and considerable business was done up to 49*l.* 15s. spot, and 50*l.* forward, prices then gave way, and quickly fell to 48*l.* 12s. 6d., and 49*l.* 5s. respectively, a steadier feeling is prevalent to-day, and we close at 49*l.* spot, and 49*l.* 12s. 6d. forward. The business in furnace material comprises the following:—At Liverpool, 100 tons yellow Quebrada ore at 9s.; 70 tons Spanish and 170 tons low produce Italian ore at 8s. 6d.—At Swansea, *nil.* Precipitate, 305 tons Mason's at 9s. 10½d.; 286 tons Rio Tinto No. 2 at 9s. 6d.; 70 tons best at 10s. 3d., and 200 tons English at 9s. 10½d. to 10s. per unit. Import of Chili copper during the past fortnight, 1400 tons fine, against 1259 tons fine same time last year; delivery, 1015 tons fine, against 1151 tons fine same time last year; import of other copper during the past fortnight, 2389 tons fine, against 1887 tons fine same time last year; delivery, 233 tons fine, against 1318 tons fine same time last year.

Arrivals here during the fortnight of West Coast S. A. produce—Tropique, from Valparaiso, &c., 550 tons bars and 230 tons ingots; Araucania, from Valparaiso, 44 tons regulus, 450 tons bars, 150 tons ingots. At Swansea, *nil.*

Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	—	393	21,236	100	—
Swansea	996	1,914	4,399	—	—
Total	996	2,307	25,635	100	—

Representing about 26,972 tons fine copper, against 26,587 tons Dec. 31; against 26,660 tons Jan. 15, 1884; 25,788 tons Jan. 15, 1883; against 25,490 tons Jan. 14, 1882. Stock of copper contained in other foreign ore and Spanish precipitate 5908 tons fine, against 5632 tons Jan. 15, 1884. Stock of Chili bars and ingots in Havre, 1105 tons fine, against 2535 tons Jan. 15, 1884. Stock of Coro Coro Barilla in Havre, 120 tons fine, against *nil* Jan. 15, 1884. Stock of copper other than Chili in Havre, 1030 tons fine, against 320 tons Jan. 15, 1884. Stock of Chili copper afloat and chartered for to date, 8674 tons fine, against 7961 tons Jan. 15, 1884. Stock of foreign copper in London, chiefly Australian, 4300 tons fine, against 3200 tons Jan. 15, 1884.

According to the Board of Trade Returns the total imports and exports into and from this country for the following years were:—

IMPORTS.	1882.	1883.	1884.
Copper in ores ..... Tons	13,424	16,255	24,423
Copper in regulus and precipitate	28,784	32,985	32,870
Bars, cakes, and ingots	35,509	25,653	39,815
In pyrites, estimated	15,673	15,016	14,077
Total	93,390	99,909	111,185
EXPORTS.			
English copper—wrought and unwrought	28,475	32,848	38,612
Foreign copper—unwrought	12,818	11,203	10,742
Yellow metal	18,154	19,864	19,337
Total	59,447	63,915	68,691

TIN-PLATES, GALVANISED IRON.—Messrs. BROOKER, DORE, and Co. (Jan. 12) write:—In tin-plates there has been an increased business done during the year; statistics show an increase on those of last year both in tonnage and value. Owing to the lessened cost of tin prices have declined; but we think that, on the whole, this branch of the trade has shown more satisfactory results to the manufacturers engaged in it than most of its sister industries. Some attention is being directed to the present mode of describing tin-plates, the old designations of coke and charcoal being incorrect. In very few instances are charcoal plates now being supplied, the great bulk of the tin-plates manufactured being of steel with various grades of tinning. It is suggested that, in future, instead of the terms "coke" and "charcoal," the plates should be described as "Siemens-Martin" steel, or otherwise if of a commoner description, with grade of tinning, A, B, C, or D, according to the quantity of tin put upon the plates. In galvanised iron the demand for home requirements has improved during the year, and the statistics also show an increasing export trade. The total shipments for last year have been 120,682 tons, against 114,015 tons the previous year. Unfortunately for the trade generally, we have now a power of production much in excess of the demand, and prices have in consequence been kept down to a very unremunerative level. This branch of the trade is in comparatively few hands, and if united action could be taken as regards output and price, we think it would be an easy matter to command at least a small manufacturing profit. As it is, some makers must have lost heavily during the year, and we question whether any have seen a fair percentage on their capital. A meeting of the whole trade will be called in about a month to consider whether any course can be taken with a view to improving the prospects of the trade.

TIN-PLATES.—Messrs. ARTHUR BIRD and Co. (Jan. 14), writes:—We commenced the year 1884 with the tin-plate trade in a very sound and healthy position, and during the first few months the figures we issued in our annual report as to production and consumption were fully confirmed by the course of the market. About that time it was evident that supply was not equal to demand, and though no great advance in values took place, manufacturers who traded carefully were enabled to see a fair margin of profit. As the year went on, however, what with the restarting of old and idle works, and the addition of mills to going concerns, the position of the trade very materially altered, and at the present time our statistics show unmistakeably that the depressed state of the trade is due to over-production. While our exports and home consumption have increased nearly 10 per cent. our present producing power shows an augmentation of nearly 20 per cent. We have every reason to hope and believe that during the coming year general trade will show some improvement over the last, and in that case we may look for a continued healthy and legitimate increase in consumption, but there is no doubt that a slight and general diminution in the production is necessary to place the trade on a profitable basis from a manufacturing point of view.

MANCHESTER GEOLOGICAL SOCIETY.—A meeting of this society was held at Owens College on Tuesday (Mr. Mark Stirrup in the chair), the Chairman with a few remarks introduced the lecturer, Prof. Boyd Dawkins, who before proceeding to deliver his lecture on "The Carboniferous Flora," said he desired to make a few observations with regard to the relation of the museum to the Geological Society. In the first place, as to the geological department, he would say that the collection of carboniferous fossils was second to none that he knew of in any part of the world. Further, that collection was due essentially to the labours of the Geological Society—that was to say, to the old and distinguished members of the society who had now passed away; and he felt that there was a distinct organic connection between the society and those collections, of which they saw around them only a fragmentary part, and which he hoped would within the next 18 months or two years be housed in very different quarters. For a geological society to flourish it was necessary that there should be a collection to which the members could refer—as necessary as it was for a student, say of literature, or of history, or of languages, to have a library to which he could turn for needful information. Suppose one of them found a fossil fern, or shell, or any other object, which he was unable to identify, his first impulse was to take it to some museum where there was a possibility of making out what it really meant in the history of Nature—for, be it remembered, a collection of fossils was nothing at all unless it told them something about Nature. The old idea that a geologist was merely a collector of his curiosities which were as dead and useless as red herrings was exploded; they ought to look upon a collector of fossils as one who was trying to gather information about those ancient changes which were revealed in the great stone book of Nature; and there they had, as nearly as they could get it, the successive pages of that great stone book placed before them, so that they might read it as best they could. But suppose the finder of a fossil was unable, even with the assistance of the specimens he found there, to identify any object, then he would say to him it was a very good reason why he should leave his specimen there, to be added to the collection, in order that others, if not he, might reap advantage from it in the future. Prof. Dawkins expressed a hope that from that time forward the connection between the Manchester Geological Society and the collections in that museum would be much closer than it had ever been, even at the time when the society had its home under the same roof as the collections themselves. Prof. Dawkins then proceeded with his address, in which he gave a highly interesting account of the ancient carboniferous flora.

Original Correspondence.

CHONTALES COMPANY, AND ITS MANAGEMENT.

SIR,—In a letter in the *Mining Journal* from the secretary of the Chontales Company, Jan. 8, in his introductory remarks, he states that the directors have abstained from noticing Mr. Palmer's various letters. I may remark that on Nov. 15, when in the board-room the Chairman expressed his sentiments on that point to me that the directors had no wish to enter upon a newspaper controversy. A short time previous to Nov. 15 the secretary, Mr. J. Jameson Truran, when I called at the Chontales office said that my letters had been seen by the directors, but they did not wish to go into a paper war with me, adding a remark not becoming a paid servant of the company, that their solicitor was on the look-out for me. Now, as "regards my statements, persistently repeated, have received a full and emphatic refutation from the chair," allow me to say that for several years I have attended nearly every public meeting of the Chontales Company, and have expressed my opinions fearlessly, and in correspondence with the directorate of the present and late company. At a public meeting the noble Chairman remarked that my correspondence had been voluminous, but no reflections was passed upon the matter contained. For some years passed through the columns of your Journal my sentiments have been fully expressed, and I challenge the secretary to prove his remarks that my statements, made personally, by letter, or through the *Mining Journal*, has received refutation; but that he cannot refute my statements may be gathered from the admitted remark, "that it would be useless endeavouring to follow Mr. Palmer through all the accusations contained in his letter of Dec. 31, simply because the secretary knows to make the attempt would be a loss of time. '

Had the secretary instead of using the word "refutation" asserted that my statements had received the objection of the directorate that would have been more in accordance with their views, but their objections are to my harping on old matters, respecting sale of our stores, price given, and to whom sold, has not been answered, and possibly may form a question amongst others at an extraordinary meeting. My opinion as regards a manager and his salary, the oft-repeated views I have taken and expressed as regards the 1000*l.* paid to Mr. Bell-Davies, and my stating that had I the opportunity I would endeavour to ascertain how the new capital of the present company has been spent." Is this an interference on the pound, shilling, and pence question of the company that does not meet with their approval?

Many a widow, many an orphan, and other shareholders, who could ill-afford to relinquish the money they had invested in the Chontales Company shares, have had to renounce their shares, such shares being forfeited in favour of the present company, who, Phœnix like, have the opportunity of rising on their ashes. This is a question that will have to be gone fully into, as to the shares when sold, to whom sold, amount realised, by whom purchased, numbers of shares sold, name of broker, if one has been employed, or if through Mr. J. J. Truran personally on behalf of the shareholders. By the report ending June, 1883, the profit on forfeited shares sold is 81*l.* 1s. 4d. It will be remembered that the shares were at that time freely purchased at 7s. 6d. each. The question arises what number of shares were sold that represent the amount of 81*l.* 1s. 4d., whilst having gone into the question as to how our m[illegible]re dealt with I draw atentiion to the following circumstance, [illegible]ich bears upon the economy of the directors.

During the existence of the late company, Earl Nelson, Mr. Hill, and the secretary (Mr. J. Jameson Truran), being directors and secretary, I received a letter from Earl Nelson stating that he would be glad for me to ascertain on what terms the miners in South Wales would be prepared to go to the Chontales Mines. I visited Merthyr, had several interviews with the miners, and in many instances had to make some acknowledgment to persons who furnished information that facilitated me in obtaining the knowledge I was anxious to obtain. There was my railway fare, my hotel expenses, an advertisement in one of the leading Welsh papers, a considerable amount of correspondence as a consequence, and the whole of the original letters forwarded to the Chontales office. I sent a charge for expenses, but the amount charged was considerably less than what I had spent; my time I gave. The amount was 2*l.* 10s. After several letters and interviews, Mr. Truran stated that the directors refused to pay my demand; that the information they might themselves have obtained by writing. They could give 1000*l.* for information they already possessed, and refuse 2*l.* 10s., after engaging my services by letter, for what many would have charged over 20*l.* The shareholders can form their own opinion whether the directors were justified in refusing payment.

As to the conduct of the secretary or directors, or both, in reference to the way in which they have acted with my proxies, the explanation given by Mr. Truran, is conclusive, and to it the directors stand committed; and with regard to its being dealt with, it is a question for the shareholders as to how and when, and if they think as I do an extraordinary meeting should be held without delay. In the concluding remarks of Mr. Truran's letter, the position assumed by the directors is, that they are the dictators of the shareholders as well as the directors, and this is in the face of an expressed opinion by their proxies, sent in favour of myself by shareholders holding nearly 30,000 votes or shares in the Chontales Company.

Exchange, Bristol, Jan. 14. WILLIAM BALL PALMER.

DIRECTORS AND PROXIES—THE CHONTALES COMPANY.

SIR,—I am desired by the board of the Chontales Company to point out, with reference to the comments on my letter contained in last week's *Mining Journal*, that my letter to Dr. Bradley asking for his proxy was written several days before proxies were lodged. My telegram to him was sent in reply to a letter from him which showed he was acting under an erroneous impression.

My board are advised that it is both the right and duty of directors to communicate freely with their shareholders at all times, and to ask their support to whatever course the board deem to be for the best interests of the company; that this is especially their duty if a shareholder appears to be acting under any misapprehension, since it is no protection, but the contrary, to shareholders to be kept in ignorance of any fact material to their interests or vote.

J. JAMESON TRURAN, Secretary.

BICKTON WOOD MINE.

SIR,—There has been a very great discovery in the above mine within the last few weeks by the cutting of a lode 4 ft. wide, containing a large percentage of arsenical mundic. The line of bearing is east and west, and the line of dip north, with two well-defined walls. This lode is some little distance south of any of the former workings; and, from its present appearance, it cannot but prove of great value, as arsenic is the only mineral that is of much value at present. I have seen the assay of two samples; they both give a fair percentage of arsenic.

I see the agents are very energetic in their endeavours to get their first parcel in the market, which I hope will give satisfaction to all concerned. There is every reason to believe from the present appearance that this year will be much more profitable to them than the last. Mining is in a very depressed state, and has been so for a long time; but it is to be hoped that as the [days] lengthen out we shall see a brighter time. There are hundreds of men now out of work that do not know where to go to earn a sixpence, and the capitalists has no heart to speculate. I hope a great change for the better is near at hand. JOHN BUCKINGHAM.

Callington, Jan. 15.

SOUTH WHEAL CROFTY.—At a special meeting, held on Thursday, Mr. Henry J. Lean in the chair, the resolution of the meeting held on Jan. 1, "That all shares on which two calls were in arrear be forfeited," was confirmed, and nine shares were ordered to be carried to the forfeited share account.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. S. J. DAVEY, mine sharedealer, Redruth (Jan. 15) writes:—We have had an inactive market this week, but Wheal Kittys early in the week advanced to 30s., and to-day Wheal Agar is up to 20¾, 21¼, West Frances, have also been in better demand. Other mines continue without much change. The following are the closing quotations:—Carn Brea, 1¼ to 2; Cook's Kitchen, 13⅛ to 14⅛; Dolcoath, 69 to 69½; East Pool, 39⅛ to 40; Killifreth, 16s. to 18s.; New Cook's Kitchen, ¾ to 1; New Kitty, 1 to 1⅛; Pedn-an-drea, ⅝ to ¾; Polberro, 2 to 2⅛; South Condurrow, 8 to 8⅛; South Crofty, 3⅛ to 4; South Wheal Frances, 7 to 7⅛; Tincroft, 5⅜ to 6; Trevaunance, 2¼ to 2⅝; West Basset, 1⅞ to 2⅛; West Frances, 8 to 8⅛; West Kitty, 8¼ to 8¾; West Polbreen, ½ to ⅝; West Wheal Seton, 1⅛ to 2; Wheal Agar, 20¼ to 21⅛; Wheal Basset, 3¼ to 4; Wheal Grenville, 5¾ to 6¼; Wheal Kitty, 1⅛ to 1¾; Wheal Uny, ⅜ to ⅝.

— Messrs. ABBOTT and WICKETT, stock and sharebrokers, Redruth (Jan. 15) write:—Only a moderate amount of business during the week. Wheal Agars strong at an advance. Closing prices herewith:—Carn Brea, 1¼ to 1¾; Cook's Kitchen, 14 to 14⅛; Dolcoath, 69 to 69½; East Blue Hills, ⅜ to ½; East Pool, 39⅛ to 40; Killifreth, 17s. to 18s.; New Cook's Kitchen, ½ to 1; New Kitty, 1¼ to 1⅛; Pedn-an-drea, ⅝ to ¾; Polberro, 2 to 2⅛; South Condurrow, 7¾ to 8¼; South Crofty, 3⅛ to 4; South Frances, 7 to 7⅛; Tincroft, 5¾ to 6⅛; Trevaunance, 2 to 2⅛; West Basset, 2 to 2⅛; West Kitty, 8⅛ to 8¾; West Polbreen, ½ to ¾; West Frances, 8 to 8⅛; Wheal Agar, 20½ to 21; Wheal Basset, 3¼ to 4¼; Wheal Grenville, 5¾ to 6; Wheal Kitty, 1 to 1⅛; Wheal Uny, ½ to ⅝.

— Mr. M. W. BAWDEN, Liskeard (Jan. 15), writes:—The mining market presents a steady appearance, and prices generally are firm. Wheal Crebor and Wheal Kitty have been enquired for during the week at an advance; business to-day mostly confined to the settlement. Subjoined are the closing quotations:—Bedford United, 1 to 1⅛; Carn Brea, 2 to 2⅛; Cook's Kitchen, 13¾ to 14; Dolcoath, 68½ to 69; Devon Consols, 1⅜ to 1⅝; East Caradon, ½ to ¾; East Pool, 39 to 39½; Glasgow Caradon, ⅛ to ¼; Gunnislake [Clitters), ¼ to ⅜; Killifreth, ⅜ to ⅞; Marke Valley, ⅜ to ½; Pedn-an-drea United, 1 to 1⅛; Phœnix United, 1¼ to 1⅜; Prince of Wales, ½ to ¾; South Caradon, ¾ to ⅞; South Condurrow, 7¾ to 8; South Crofty, 4 to 4⅛; South Frances, 7 to 7⅛; Tincroft, 5¾ to 6; West Basset, 2 to 2⅛; West Caradon, 1s. to 1s. 6d.; West Frances, 7½ to 7⅝; West Kitty, 8¾ to 8⅛; West Crebor, 1s. to 1s. 6d.; West Phœnix, ⅛ to ¼; Wheal Agar, 19¼ to 20; Wheal Basset, 3⅛ to 3⅜; Wheal Crebor, 1½ to 1¾; Wheal Grenville, 5¾ to 6; Wheal Kitty, 1⅛ to 1¼; Wheal Uny, ¾ to ⅞.

— Mr. JOHN CARTER, mine sharedealer, Camborne (Jan. 15), writes:—The share market has been rather quiet this week, and changes in prices are but trifling. The following are the closing quotations:—Carn Brea, 1½ to 1¾; Cook's Kitchen, 13½ to 14⅛; Dolcoath, 69 to 69⅛; East Pool, 39¾ to 40¼; Killifreth, ¾ to ⅞; New Cook's Kitchen, ½ to 1; New Kitty, 1½ to 1⅝; Pedn-an-drea, ⅝ to ¾; South Condurrow, 8 to 8⅛; South Crofty, 3½ to 4; South Frances, 7 to 7¼; Tincroft, 5¾ to 6⅛; West Basset, 1⅞ to 1¾; West Frances, 8 to 8⅛; West Kitty, 8 to 8⅛; West Peevor, ¼ to ½; West Seton, 1½ to 2; Wheal Agar, 20¼ to 20¾; Wheal Basset, 3¾ to 4; Wheal Grenville, 6 to 6¼; Wheal Kitty, 1 to 1¼; Wheal Peevor, ¼ to ½; Wheal Uny, ⅜ to ⅝.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, stock and share brokers, Queen's Chambers, Market-street (Jan. 15), write: Whilst the minor markets exhibit no general tendency nor feature of special moment, several movements, some of which are very decided, have occurred in the more prominent investment and speculative securities. In home railways changes are recorded almost all round with a distinctly adverse majority. The publication of dividends has been the main agent in alterating quotations during the week, and, though the announcement have come out fairly up to expectations regarding the present payment, the indications for the future have been viewed gloomily, and serious depression has in many cases been experienced. Canadians are comparing against very low traffics of last year; but, as the cause of the low returns of a year ago are well known, the favourable comparison has not helped their values. American Rails, though once or twice showing comparative strength, have fallen away again. Foreign Funds are irregular. A feature in this market is the decisive decline in Argentine, Public Works Bonds being 2, and Hard Dollar Bonds 5, down. Portuguese are 1; Italian Five per Cent. (1861), ⅜; and Russian, Five per Cent. (1873), ⅛, lower. On the other hand, Spanish Four per Cent., are 1; Egyptian Unified, ⅜; ditto, Daira Sanieh, ⅛; ditto, Preference, ⅛; Mexican Tures per Cent. (1837), ¼; and Turkish General, ⅛ higher. The alteration given to the settlement completed yesterday has apparently and, as is very usual, interfered with miscellaneous business, the transactions reported therein reaching only a very moderate total.

BANKS retain their foremost position amongst the miscellaneous series both as regards business in progress and the stability of their values. Partial changes have occurred in the following:—Union of Manchester, buyers' figure reduced ⅛. Consolidated, sellers of which ask ⅛ more. Bank of Bolton have settled a bit from the first bound on the scheme reported last week. Sellers of A Preference shares ask ⅛ less, buyers' figures remaining unaltered; and for B Ordinary shares the margin is narrowed a little, buyers' figure being ⅛ better, and sellers ⅛ lower, without however producing any business publicly recorded. —Higher: Manchester and Salford, ⅛ to ¼; Liverpool Commercial, ¼; Manchester and County, ¼; and Oldham Joint-Stock, 1/16.—Lower; National Provincial New, ⅛; and Manchester and Liverpool District, ⅛.

INSURANCE.—Though transactions are very few record of changes in prices is good, the only decline being ⅛ in Thames and Mersey Marine, whilst the following are higher:—Liverpool and London and Globe, ⅛; Queen, ⅛; Reliance Marine, ⅛; London and Lancashire Fire, 1/16; and Royal Liverpool, 1/16.

COAL, IRON, &c., AND MINING.—Business again almost nil, and alterations in prices once more show an adverse majority. Copper concerns are better, though below best of the week, this remark applying to Panulcillo and Tharsis. Rio Tinto, too, are ⅛ better. Earle's Shipbuilding ¼ higher.—Lower: Chatterley, ⅛ to 1; Cammell, ⅛; Telegraph Construction and Maintenance, ⅛; and United States Rolling Stock ⅛, besides a few others about ¼ down.—COTTON SPINNING shares are about steady, and without feature.—TELEGRAPHS irregular, but no great change except in Western and Brazilian, which are ⅛ to ¼ down on the announcement of no dividend.—TELEPHONES quiet and easier.—MISCELLANEOUS: Manchester Carriage and Trams of all issues sharply advanced. Liverpool Storage, ¼ down.

RAILWAYS have shown numerous fluctuations, with a generally lower balance. Southern Stocks all easier, led by the South-Eastern dividend announcement, which is 1 per cent. lower than last year. The Brighton dividend is the same as last, but operators have made a raid on the A stock, and prices are much lower. Metropolitan having had to take 14,300*l.* from reserve to pay them 5 per cent., and having a large amount of new stock to begin paying upon, have suffered heavily, and in sympathy with these Metropolitan Districts too have been seriously affected, helped by fears of outrages, their line being supposed to be attractive to such operations. Sheffield, A's, have been better, but have lost most of their advance, the same remark applying to Scotch stocks.—Canadians: Trunks return total traffic 11,532*l.*, but by reason of low comparison it is well known and prices are lower. Americans, with slight fluctuations, have gone lower, and to-night there are symptoms of a general collapse. Mexican Rails are without feature; traffic, 3600*l.* decrease.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STERLING.—Mr. J. GRANT MACLEAN, sharebroker and ironbroker (Jan. 15), writes:—During the past week there has been more business doing, and prices are in some cases better. It is evident if the markets for metals would improve, even to a moderate extent, prices of many shares would have a marked advance. An improvement in trade, is, therefore, much to be desired.

In shares of coal, iron, and steel companies prices are steady. Cardiff and Swansea are 42s. 6d. to 47s. 6d.; Clyde Coal, 53s. to 54s.; Marbella, 41s. to 43s.; and Mwyndy, 3s. 6d.

In shares of foreign copper concerns prices show a good advance. Tharsis improved from 5*l.* 2s. 6d. to 5*l.* 3s., but are now a little easier. Mason and Barry, Rio Tinto, Cape, and Panulcillo shares are all in favour. Tocopilla, 1s. 9d. to 2s. 6d. Yorke Peninsula also better.

In shares of home mines prices do not show much alteration. Devon Consols are 27s. 6d. to 32s. 6d.; Devon Great United, 2s. 6d.; Ecton, 30s. to 35s.; Glasgow Caradon, 5s. to 6s.; Leadhills, 22s. 6d. to 25s.; New West Caradon, 2s to 3s.; New Langford, 1s. to 2s.; Rhosesmors, 15s. to 20s.; Standard Lead, 17s. 6d. to 22s. 6d.; St. Just United, 4 to 5; Tregontreea, 2s. 6d. to 3s. 6d.; West Phœnix, 3s. 6d. to 4s. 6d.; Wheal Crebor, 17s. 6d. to 22s. 6d.; Wheal Kitty, 25s. to 27s. 6d.; and Wye Valley, 1s. 3d.

In shares of gold and silver mines there has been a considerable amount of business done. Montanas have improved from 18s. 9d. to 24s. Balkis have also improved to about 5s. on favourable mine reports. Chile (debentures) offered at a small premium, and Kohinoor (debentures) at a small discount. Mackay and Revolution, also Ouro Preto, shares offered. Chiles keep firmer on good mine reports. Argenta Falls Silver are at 6s. 6d.; Akankoos, 4s. to 5s.; Chontales, 2s. 6d. to 3s. 6d.; California, 5s. to 6s.; Cartagos, 9s. to 11s.; Colar, 3s. to 4s.; Eberhardt, 2s. to 3s.; Great Zarumu, 7s. 6d. to 10s.; Gold Coast (Preference), 7s. 6d.; Hoover Hill, 4s. to 5s.; Indian Consolidated, 3s. to 3s. 6d.; Kimberley North Block, 30s. to 40s.; Kohinoor B, 3s. to 4s.; Lisbon-Berlyns were 17s. 6d. buyers, but are now 14s. sellers; La Plata, 4s. 6d. to 5s. 6d.; New Potosi, 15s. to 16s. 3d.; Oscar, 16s. to 17s.; Ooregum, 2s. to 3s.; Orita, 26s. to 28s.; Organos, 10s. to 12s.; Pestarena, 1s. to 2s.; Port Phillip, 1s. 6d. to 2s. 6d.; Tolima A, 80s. to 90s.; Tacquah, 1s.; Victoria, 10s. to 12s.; and West Callao, 2s. 6d. to 3s. 9d.

In shares of miscellaneous companies business has been quiet. Lanark Oil shares have declined to 42s. 6d., notwithstanding they are so scarce that a backwardation of 2s. 6d. per share was paid on them this settlement. English Crown Spelter are at 40s. to 45s.; Home Mines Trust, 15s. to 17s. 6d.; and Nobel's Explosives, 17 to 17¼.

EDINBURGH.—Messrs. THOS. MILLER and SONS, stock and share brokers, Princes-street (Jan. 14), write:—The past week has been a quiet one on the Exchange; Caledonian Railway stock has improved, and most other ordinary stocks have been firm. Some preference and debenture stocks have been offered at reduced quotations. Canadians have been weak. In banks, Bank of Scotland, Commercial, Royal, and Union are all better. Arkansas Valley, Land, and Cattle shares have fallen 10s. on the announcement that there would be no dividend for the past year. Vale of Clyde Tramways have risen 5s. Arizona Copper are 3d. higher at 18s., Rio Tinto and Tharsis shares have both improved. Lanark Oil shares have shown further weakness. Pumpherston, West Lothian, and Young's have improved.

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—H. Trezise, Jan. 13: McCallan's engine-shaft is sunk below the 75 6 fms.; the ground is much improved for sinking, and very congenial for the production of copper ore. In the 75 east the lode is of a promising character, composed of strong capel, mundic, and ore. In the same level west the drivage is by the side of the lode; judging from the dip of the ore in the 62 west, this end is about 10 fms. from the ore ground. The lode in the 62 west is unproductive for the present, but the channel of ground is still very congenial for the production of ore. I have a very good opinion of the western ground because of its mineral-bearing strata. In the 62 east the drivage is by the side of the lode. I am pushing on this end with all possible speed, in order to communicate with the winze sinking below the 62. In the 62 east the lode is larger but unproductive. No. 1 stope in the back of the 62 west is worth 5*l.*, or 2 tons of ore per fathom, No. 2 is worth 5*l.*, or 2 tons of ore. No. 3 stope is worth 4*l.*, or 1½ ton of ore. No. 4 is worth 3*l.*, or 1 ton of ore. The winze sinking below the 62 by a full pare of men is down within 5 fms. of the 62, in which there is a lode 3 ft. wide, of a very promising character, worth 7*l.* per fathom, or 2½ tons of ore. I expect to communicate with the 62 in the course of another month. A stope on the bottom of the 42 is worth 5*l.*, or 2 tons of ore per fathom. Stope in the back of the 42 is worth 7*l.*, or 2½ tons of ore per fm. The pitches throughout the mine are without any material alteration since last week's report. The work of the mine is progressing satisfactorily.

CARN CAMBORNE.—W. C. Vivian, Jan. 15: In the 105, west of engine-shaft cross-cut on new south lode, the appearances are much the same as when last reported. In the 105 cross-cut south we have commenced blasting the sides where the rock had somewhat the character of lode (as noted in former report), and there was a little water issuing. I cannot say as yet what this may lead to.

CASHWELL LEAD.—John Peart, Jan. 9: The vein in heading next to drift forehead going west still continues hard in the low part, and straight, and it does not yield so much bouse, but is worth 15 cwts. of lead ore per fathom. The heading coming east in the above stratum is broken at the top, but harder in the low part; the ore is not regular, some places very good and other places rather poor, but will average 1 ton of ore per fathom. The drift going west on copper hazle continues hard, there is a good deal of vein but not very much ore. The rise in east end in the above stratum is very hard; we are now cutting cross to hole into the Scar limestone drift, the reason of this is the vein has made a slip to the north in going down.

CATHEDRAL CONSOLS.—S. Davey, Jan. 15: In my last report I informed you I was of the opinion we were about approaching either a branch or lode. This has proved to be a branch composed of a little copper and specimens of mundic, letting out water freely. From this place we have extended 9 ft., where the ground is not so hard, containing small veins of quartz, which are also letting out water, and has a better appearance for the lode producing mineral when intersected. Better progress is being made in driving, and the total distance from shaft is about 41 fms. The lode in the 84, driving east, is larger, 3 ft. wide, producing mundic, copper, and a little tin, a fine-looking lode, and seems to be getting larger. The stuff we are saving, in order to see if it is worth selling for tinstuff. In the 50, driving east, we have met with rotten ground, and the lode being poor would require timbering. I have removed these men to sink a winze at the 70 in the great gossan.

COED-Y-FEDW AND PANT-Y-BUARTH.—R. Prince, Jan. 15: Pant-y-Buarth Mine: With the exception that the ground has become stiffer, and that water oozes out from all parts of the forebreast, there is nothing fresh of importance to report of our 70 south. The lode in the 90 west is opening out, the matrix being composed of a nice mixture of spar, lead, and blende, and an early improvement may, I think, be confidently relied upon. The pitch in back of the 112 west has produced some capital leadstuff since my last report; it is now worth fully 2 tons per fm. At the commencement of next week two new sets of men will take tribute bargains at remunerative prices.

CREGIOG.—H. Hotchkiss, Jan. 14: Meadow Shaft: The 130 yards level, east of shaft: The lode is 18 in. wide in this end, and has a mixture of blende ore; is now letting out a little water. The 130 west: The lode maintains its former size, and much the same in character as last week, with a little lead ore against the south wall near the sole of the level. I have to-day taken the two men I had working on the new lode and put them to sink a little on the ore passed through in the 130 west, in order to see if the continues down.

DEVON GREAT CONSOLS.—I. Richards, Jan. 15: Wheal Maria: Satisfactory progress continues to be made in connection with the preparatory work for draining the eastern shaft on the Capel Tor lode. The angle bob connecting the line of rods with the water-wheel at Gard's shaft is being fixed in its place. The excavation for travelling bob pit will be completed in a few days, and the bob-plat in the adit for angle-bob is already cut. The shears and capstan are being erected, and we hope to have the whole of the pumping machinery at work in the course of a fortnight, when the sinking of the shaft will again be resumed in this very promising part of the company's property.—Wheal Emma, Railway Shaft, New South Lode: The 220 west, on the south part of the lode, continues to yield small quantities of copper and mundic ores.—Watson's: In the engine-shaft sinking below the 112 the ground is of a congenial character for the production of mineral, and is tolerably favourable for progress. In the 112, west of the engine-shaft, the lode west of the cross-course has assumed a more settled state, and is again yielding 3 tons of copper and mundic ores per fathom. There is no important alteration at any of the other points of operation throughout the mines.

D'ERESBY.—J. Roberts, W. Sandoe, Jan. 14: We have all the force of men still on the south end of the sump at No. 6, so as to get down this end in line with the new shaft as quickly as possible, when we shall be able to sink directly under the shaft, and at the same time extend the stopes from the shaft to the length of the whole ore ground, and we shall be able also to wind the stuff direct from the bottom of the sump to the surface with the engine, instead of winding it up to the No. 6 by hand labour. We are getting the winding arrangements near to a close, and we expect before the next week's report it will be in full working order.

DRAKEWALLS.—Thomas Gregory, Jan. 15: The lode in the engine-shaft sinking below the 192 maintains its size and value for tin as reported last week. In the deep adit end, east of Mathews's shaft, the branches are of the same favourable description for tin ore and mundic. Tin branches in the new winze sinking below the 60, east of Mathews's shaft, are improving for tin, and opening some paying ground. No change in the 50 cross-cut north to report this week.

EAST BLUE HILLS.—S. Bennetts, W. K. Mitchell, Jan. 14: The lode in the engine-shaft continues highly promising, is rather wider than the width of the shaft, and is worth 10*l.* to 12*l.* per fathom. In the 10 fm. level east end, although producing some tinstuff, it is at present not of much value. The stope in the back of this level is without much change. In the adit east end the lode is gradually improving, is from 2 to 2½ ft. wide, and worth 6*l.* to 7*l.* per fathom. This end being the farthest east of either end in the mine is a most encouraging feature. A portion of the stamping engine has been delivered on the mine, and we expect the remainder in the course of a couple of days.

EAST CARADON.—Wm. George, Jan. 13: Having cleared the adit so far as practicable, we are now driving a side tie to let down the water in the adit between the two shafts in firm ground, which is favourable for driving, and good progress is being made.

EAST WHEAL ROSE.—W. Skewis, T. Doidge, Jan. 13: North Wheal Rose: The cross-cut between the No. 2 shaft at the 110 is cleared, and the ground cut for bearers, and bearers fixed all in readiness to drop the drawing lift to the 120, and which will be done as soon as the pole now being fixed at Penrose's shaft is put to work. The winding engine for this part is being delivered, and we hope to have it all on the mine together with boiler by the end of the week.—Pensose's: The ground is cut at the 100, and bearers fixed, and 20-in. lift dropped into the water to the 110. The No. 4 pole which is being fixed at the 100, is nearly completed and will be finished and set to work in a few days, after which we shall soon reach the 110, and drop away from these to the 120. The shafts being now clear, the fixing and dropping of the lifts in the future will occupy the greatest part of our time, as the water with the two engines is of no difficulty and can be rapidly forked.

Baynard's Shaft: This shaft is cleared to the 90, and the cross-cut at this point from the shaft to Middleton's lode is cleared and repaired. We find that the Middleton's lode at the point of intersection by the cross-cut is divided into two parts, having a horse of killas between them 6 ft. wide. There is a level driven on both parts, and which, as far as can be seen, is running parallel with each other. We have selected to open up the eastern one, as greater dispatch can be made and less timber required. A few holes have been made in the western level at two or three points, and samples taken from the stall stuff producing from 6 per cent. to 17 per cent. of silver-lead. As soon as the eastern level is communicated with Penrose's cross-cut at the 90, so as to ventilate this part, tributers will at once go to work in the western level, and open it up for themselves. The machinery is all in good working order.

GAWTON.—Moses Bawden, Jan. 8: Setting Report: The 117 fm. level to drive east, by four men, at 11*l.* per fathom. Since my last report we have passed through another cross-course in this level, and I am pleased to say that the lode to east of same is producing a little more arsenical mundic with stones of copper ore. The 95 to drive east, by two men, at 10*l.* per fathom; the lode in this end is still in a disordered state, and not to value. The cross-cut to drive north at the 105, by four men, at 7*l.* per fathom; the ground in this cross-cut is of a most promising character for the production of mineral. No. 1 stope in back of 117 east, by two men, at 4*l.* 5s. per fathom. No. 2 stope in back of 117 east, by four men, at 5*l.* 15s per fathom. Stope in back of 95 east, by four men, at 4*l.* 15s. per fathom. Stope in back of 82 east, by four men, at 3*l.* 15s. per fm. Stope in back of 70 east, by two men, at 4*l.* per fathom. Our stopes will yield on an average about 9 tons of arsenical mundic per fathom each, and a little copper ore. Every effort will be made to increase the output, and all cost possible will be reduced.

— G. Rowe, Jan. 12: The lode in the 117 east is looking promising, and turning out some first-class arsenical mundic, with occasional good stones of ore. The lode in the stope in back of this level will yield 6 tons of mundic per fm. The stope west of winze in the back of the same level will yield 7 tons of mundic and 1 ton of ore per fathom. The ground in the 105 cross-cut is principally capel and spar, mixed with spots of ore and arsenical mundic. All other points continue without change.

GOODEVERE.—R. Knott, Jan. 14: Good progress continues to be made in clearing up the deep adit. During the past week we have been engaged in clearing a run which was caused by the giving away of some old timber. I am, however, pleased to state that this chokage is cleared, and the adit at this point made secure with good timber. About 90 fms. of the adit is now cleared, and the tramroad made good at this point. I find the side of the level turned in, but this I anticipate will soon be put right. To the east of this we shall have to lay down several fathoms of tramroad, which has never been done, and I think about a fortnight from this date the adit will be placed in good working order, and driving commenced.

GREAT HOLWAY.—W. T. Harris, Jan. 15: Roskell's Shaft: In the 95 north I am pleased to report a still further improvement for lead, now yielding saving work, with prospects of the most sanguine character; the ground also is highly mineralised, and water issues from the forebreast; fair progress is being made.—Level Engine-Shaft: The 80 east rise in back contains blende 6 in. wide in favourable ground; the object of this point is to communicate with the winze below the 60.—Tribute: The 60, No. 1 pitch in back west, is worth 15 cwts. lead and 1¼ ton blende per fathom. No. 2 pitch maintains the value last reported—2¼ tons lead and 1¼ ton blende per fathom. No. 3 pitch, in

bottom of level, is producing 5 cwts. lead and 1¼ ton blende per fathom. No. 4 pitch, in bottom east, has much improved both for lead and blende, now yielding 15 cwts. and 1¾ ton respectively per fathom, and also indicates a fresh run of productive ground still further east. Should this prove fact I need scarcely say the value of the mine would be enhanced immensely. No. 5 pitch, in back west, is producing 1 ton lead and 1¾ ton blende per fathom No. 6 pitch is worth 15 cwts. lead and 1¼ ton blende per fathom. No. 9 pitch in back is yielding 15 cwts. lead and 1½ ton blende per fathom. No. 10 pitch, in back of level, is worth 15 cwts. lead and 1 ton blende per fathom. Pitch in bottom is yielding 10 cwts. lead and 1 ton blende per fathom.—Brammock Shaft: The 60 east, No. 1 pitch in back, is producing 12 cwts. lead and 1 ton blende per fathom. The same applies to No. 2 pitch in back.—Office Shaft: The 60 west, No. 1 pitch, is worth 3 cwts. lead and 1 ton blende per fathom. Machinery in good condition and working well. Surface and other operations progressing with usual regularity. Have to-day sold 30 tons lead ore at 9l. 6s. 6d. per ton, and beginning of next week shall sell a parcel of blende.

GREEN HURTH.—James Polglase, Jan. 8: The bottom end north is worth 2 tons per fathom. The bottom end south is worth 1¼ ton per fathom. The 44 north is without change. No. 1 stope is worth 7 tons per fathom. No. 2 stope is worth 3 tons per fathom. The stope in back of Standage level is worked out. Drift in back of trial level is worth 1½ ton per fathom. The vein in back of the 30 south is worth ¾ ton per fathom. The adit level east is without change. We have done very little in the dressing department during the week.

GREAT LAXEY.—W. H. Rowe, Jan. 14: There is no change to notice in the 271 and 259 ends driving north of Welsh shaft. The lode in the 247 end continues to be worth 10l. per fathom, but of a stronger and healthier character than of late, and seeing that there is a good, though short, run of ore a few fathoms ahead in 235, we ought to see an early improvement at this point. The new joint rise, and stope in this level is worth 15l. per fathom. The crosscut in the 235, south of engine shaft, is still in vein ground, though nothing further of value intersected. It is very desirable, however, to prove the lode thoroughly before resuming the driving southwards. A stope in the sole of the 220 north has improved to 20l. per fathom, and one in the 145 roof to 30l. per fathom, while the rise in the latter place has fallen off in value.—Dumbell's: The 243 end north is worth 6l. per fathom; a roof stope, 15l. per fathom; the 230 end north, 6l. per fathom. In order to expedite a communication with the level above, now much needed for ventilation, &c., we have decided to put the end men temporarily to rise. The value of the workings in this level are at present as follows:—A joint sink and stope, 10l.; two joint rises and stopes, 10l. and 3l.; and a roof stope, 10l. per fm. In the 215, two winzes, 20l. and 8l. per fathom, and a sole stope, 15l. per fathom. In the 200, a sole stope, 20l. and four roof stopes worth respectively 18l., 12l., 35l., and 20l. per fathom. The rise in the 200 is now holed to the 185, both ends affording fairly good ground for stopes. The 170 end north continues poor. A joint rise and stope is worth 15l. per fathom. In the 85 north we have commenced the new cross-cut. The stopes in the roof of this level have declined in value, but the 60 rise keeps good; present value 25l. per fm. The lode in the 37 end north has again become small, and without ore.

GREAT WEST SHEPHERDS.—R. Nancarrow, J. Nancarrow, Jan. 13: We are pleased to say that the water is in fork in both shafts, and the sinking of the same is progressing favourably, the new engine-shaft being sunk by nine men and Browne's by six. These two points will be vigorously worked, so as to reach the lodes as early as possible. We have also a pare of men clearing the 16 west, which had been broken down, and we find here saving work for lead and blende. Our object in doing this is to effect a communication with the western shaft, so as to ventilate the mine and open up tribute ground. The engine, with flat-rods and pitwork is working in a satisfactory manner. All our surface work is being proceeded with as fast as possible—closing up the engine-house floor, fixing horse-whim, &c., all of which will have our best attention.

HEALEYFIELD.—J. Trelease, Jan. 9: We are still driving under the grindstone sill. We have driven over 4 fms. this week, partly in plat. We are skirting the bottom part of the sill, which pro tuces good samples of galena ore; t is augurs well that there is still a productive run of ground ahead of us, in fact, the strata is highly mineralised. I have reset Cherry's bargain in the bottom of incline at 36s. per bing, worth 15 cwts. of lead per fathom. Woodworth's tribute stope still worth 15 cwts. of lead per fathom. The crusher has been started this week, and we are still crushing, the severe frost, however, rather impedes our dressing operations. Machinery working satisfactorily.—P.S.: Since writing the above I am pleased to inform you that we have just blasted a hole in the bottom part of grindstone sill, which has opened out some good strings of lead ore, over 1 in. in thickness; there is surely something good ahead of us. These strong strings fully persuade me that we shall find more or less all through this sill we have driven through northwards. We will drive over 9 fms. for the fortnight. I hope to start stoping out the south end next week.

HOLYWELL DISTRICT LEAD.—R. Rowlands, Jan. 15: I am pleased to be able to write that both of our main points—the 110 and 80 levels—have changed for the better. The 110 west is 1½ ft. wide of spar and white chert, containing a rib of capital steel ore, worth 8 to 9 cwts. per fathom. Tribute pitch in No. 2 rise is turning out 7 to 8 cwts. of lead per fathom. The 80 level east is fully 4 to 5 ft. wide, and the matrix is most promising for large returns; the strata keeps very flat at present, which holds the lead in the roof, where the quantity has increased to 8 cwts. per fathom. Nos. 1 and 2 pitches are yielding good stuff for the dressing floors.

KIT HILL GREAT CONSOLS.—Isaac Richards, Jan. 15: "At the tunnel level the granite continues of rather a hard and close nature. The distance driven during the past week is 2 fms.—North Engine Shaft: This shaft having now nearly reached the depth for another level—the 110—a plat will be cut, the shaft will be cased and divided, skip-road laid, and ladder-road put in from the 100 to the present depth, which work we hope to complete in about six weeks. On the completion of the above preparatory works, the driving of the 110 east for effecting a communication with the tunnel will be commenced, and every exertion will be used to make the communication as quickly as possible. In the meantime it is highly probable that profitably productive lodes will be met with as the tunnel is extended into this most promising tract of mineral ground.

LEADHILLS.—A. Waters, Jan. 14: Brow Mine: Gripp's adit, going north of Glengonar engine-shaft, is driven 307 fms. 1 ft., and is now in a vein 4 ft., carrying a branch of quaftz 20 in. in width, but without ore to value. The forebreast is more wet than for some time past.—George's Roust: Gripp's level, north of Muir's cross-cut, driven 200½ fms.; lode in present end 4 ft. wide, and though without ore at present looks likely to become productive shortly.—Brown's Mine: The 100 is driven south of Wilson's shaft 8 fms. 5 ft. 6 in.; lode in the end is 3 ft. wide, yielding stones of ore, and improving as we go forward. No. 1 stope, in the 100, south of Jeffrey's shaft, is worth 25 to 30 cwts. of lead ore per fathom. No. 2 stope, 40 cwts per fathom; No. 3 stope, 20 cwts. per fathom; No. 4 stope, 40 cwts. per fathom. The 85, north of Jeffrey's, is driven 53 fms. 1 ft. 6 in.; lode 4 ft. wide, composed of quartz and small bits of ore. The stope below the 85, south of Jeffrey's, is worth 85 cwts. per fathom. No. 1 stope, above the 85 south, is worth 25 cwts. per fathom. No 2 stope ditto, 30 cwts. per fm. The winze below the said level, south of Wilson's, is worth 40 cwts. per fathom The stope n back of the 85, south of the shaft, is worth 3½ to 4 tons per fathom; set at 10s. per ton. The stope above the 70, south of the above shaft, is worth 65 cwts. per fathom. The stope north of ditto 50 cwts. per fathom. The stope in the 41 south is worth 20 cwts. per fathom. The 10, going north of No. 1 winze, below Gripp's, south of Wilson's, is worth 40 cwts. per fathom. The 10, south of No. 2 winze, following the adit end, is in a lode 3 ft. wide, of a promising character. The stope in the back of this level, south of No. 1 winze, is worth 50 cwts. per fathom. The stope above Gripp's, in No. 3 run of ore, is worth 40 cwts. per fathom.—Raik Vein: The pitch above Gripp's, south of Reid's shaft, by three men, at 90s. per ton, is worth 20 cwts. per fathom.

MARKE VALLEY.—Wm. George, Jan. 15: Wheal Jenkin: In the 25 east from Bellingham's shaft the part of the lode carried is getting more settled, and producing better quality stamping work than we have had for some time past. There is no alteration in the value of rise in back of this level since last reported on. The stope in back of the 15, east of the cross-course, is worth 8l. per fathom. The stope below the adit, and west of the cross-course, continues worth 30l. for the full width carried.

MELLANEAR COPPER.—John Gilbert, Jan. 14: The ground in the 72 cross cut driving north of the main lode, feast of Gundry's shaft, is favourable for driving, and is still full of mundic, and presenting a very kindly appearance for copper ore. The lode in 100, west of Gundry's shaft, is 1½ ft. wide, and yielding occasional stones of copper ore, and letting out some water, but is not looking so promising as it did a short time ago. The lode in the 110, west of shaft, is 4 ft. wide, and yielding ¼ ton of copper ore per fathom, and some low quality tinstone. The lode in 110, east of cross-course, east of shaft, is 3 ft. wide, and yielding some good stones of copper ore, and is also worth 7l. per fathom for tin. In the 120, east of shaft, the lode is 4 ft. wide, and yielding 2 tons of copper ore per fathom, and good stones of tin, and some saving work for sulphurous mundic. In the 120, west of shaft, the lode is 2½ ft. wide, yielding 1 ton of ore per fathom, getting better defined, and looking kindly to improve. In the 130, east of shaft, the lode is 5 ft. wide, and yielding 1 ton of copper ore per fathom. In the 130, west of shaft, the lode is 5 ft. wide, and yielding 1 ton of copper ore per fathom, and some good stones of tin. The stopes and tribute pitches are just the same as when last reported. We shall sample on Tuesday next about 500 tons of copper ore.

MID-DEVON COPPER.—James Neill, Jan. 10: A Shaft: The drawing lift from 90 to 80 was satisfactorily set to work on Monday last, and continues to do good duty. The footways and all necessary stays to lift and rods and all other necessary work for sinking below 90 was completed and work resumed in bottom of shaft on Wednesday last, since which it has been sunk 1½ ft., making total depth below 90 plat 1 fm. 2 ft. 7 in. The sinking lift copes with water in bottom of shaft easily. The rock is more porous, and has a better cleavage, therefore, expect to make good progress with the pare of 12 men.

MOUNTS BAY CONSOLS.—W. Argall, T. Job, Jan. 10: In the 20 level, which is opening up tribute ground, the lode is getting large, and we are looking out for an improvement when the south branch falls into the lode; we are driving 8 fms. per month in this end. We have 10 tribute pitches working at 13s. 4d. and 15s. in 1l., and we are progressing very well with our next parcel of tin.

NEW CARADON.—N. Richards, Jan. 14: On Saturday last we set the shaftmen a bargain to sink 6 ft. in the shaft, change the lifts, put in extra main-rods, ease the lower part of the shaft, &c. This work will be urged on as fast as the nature of the same will admit.

NEW LANGFORD.—T. Gregory, Jan. 14: The lode in the 10, west of engine-shaft, continues of the same favourable character and composition as reported last week. The lode in the 30, west of engine-shaft, is from 4 to 5 ft. wide, producing from 3 to 4 tons of mixed ores per fathom. We are drawing and dressing ore for another sampling. All is working very well, and the water in the mine easy.

NEW TERRAS.—R. Eade, Jan. 15: The lode in the bottom end, west of engine shaft, is over 30 ft. wide, and we are carrying the end the whole width of it. It has two beautiful walls; several wagons of very rich tinstuff were sent up yesterday broken from the north wall. Some large lumps assay quite one quarter tin. It appears to be at the junction of another lode, and they intersect each other at acute angles. After we get sufficiently we shall open to the north and ascertain what this apparent lode is like. All the stopes and the ground in the east shaft are much the same as last reported. Yesterday I tried a sample broken from the lode, west of this shaft, which gave 35 lbs. of tin to the ton of stuff. It came from about 7 fms. below surface.

NEW WEST CARADON.—N. Richards, Jan. 14: The level driving east on No. 5 lode at the 38 is now near the eastern boundary and suspended until the lords have decided where the boundary line shall be drawn. This lode west is at present small and unproductive, but as the lode is given to changes we hope it will soon improve again. There is no change to notice in the cross-cut south of this leve

NORTH GREEN HURTH.—J. Polglase, Jan. 8: The new vein, east from south level, is of a very kindly nature. There is not much done on the new vein westward this week. The men have been taking down corner of ground, fixing rails, &c., for the transit of stuff in this direction. The deep cross-cut is without any particular change. The adit level in Hospital property continues about the same.

OWEN VEAN AND TREGURTHA DOWNS.—William Derry, Henry Prin, Verrant James, Jan. 15: During the past week the 40 end east has maintained it value of 1 ton of tin per fathom until to-day, when it has somewhat decreased in productiveness, but we hope this is temporary. The 36 east has improved in value. The 67 east has now reached the cross-course. We have not yet cut the middle lode in the north cross-cut, but the end is very wet and sparry, from which we judge the lode to be near. The stopes are producing their average quality tinstuff. The new calciner, the stamps, and the machinery generally work splendidly.

PENEGARREG SILVER-LEAD.—Lewis Evans, Jan. 14: I visited the mine yesterday, and went through undergrouni, and am glad to be able to say that I think altogether the mine looks more promising than I have seen it before. Progress during the last month or two has been much delayed by bad falls of ground in the No. 1 and 2 adits; these have been secured, and will not, I think, cause any trouble for a long time to come, although there are still some weak places in No. 2 adit. We have now three principal points of operation all in the deep adit level. These are the driving on the lode north of the slide. The driving south of the slide, and a driving on a branch or lode in the elvan in west end of deep adit. The driving north on the lode has, as you are aware, gone some distance, and I was suspended to drive a cross-cut west from near the end of the driving. In this cross-cut a strong lode has been cut, but it does not appear to contain any ore, but there is a strong stream of water, and I think, it will form a junction with the other lode in a short distance. The cross-cut is being continued at present, and if nothing fresh is met with I shall put the men to drive upon the lode as far as the junction of the two. The driving south has only been carried 3 fms.; as yet the lode is promising, with spots of lead. There is no doubt now that we are on the lode, which was worked above in the old workings, and as this level is going into the hill it may be very important. In the deep adit west we are driving north on a branch crossing the elvans; it contains some very nice pieces of lead, and looks exceedingly promising. Everything in connection with these lodes leads me to the belief that to get permanent riches we must go considerably deeper, and I think a adit on going deeper, we shall simply have to drive straight across to them, and there will be no uncertain searching for them. I should strongly advise you to, if possible, arrange to unwater the shaft and proceed to work deeper.

POLBERRO.—W. Vivian, Jan. 7: There is not any change to notice of importance since my last report. A full report will be forthcoming at the general meeting of shareholders to be held in a few days.

POLCREBO TIN.—W. H. Martin, Jan. 15: The prospects are much the same as reported last week. The ground in the 40 east is easier, and more water is issuing from the end than we have seen for the last 15 fms., and the south course is inclining further south, and fast approaching the Great Wheal Worthy lode. The ground is very much stained with red iron. The main lode is north of this level. This part of the mine is a most important place to be looked to. Next week I will send you the usual full monthly report.

PRINCE OF WALES.—S. Roberts, Jan. 13: In the 102 fm. level east the men are engaged tramming their attle, as soon as which is done they will at once commence to take down the lode which is now standing each side of the level, and as far as seen is very promising. The lode in the stope in the back of this level is 4 ft. wide, worth 6l. per fathom; lode in the stope in bottom of the 90 east is 3 ft. wide, worth 5l. per fathom. In the 90 west the ground is still hard, and the lode rather small, 2 ft. wide, composed of capel, mundic, and a little copper ore, but not to value. Our tribute pitches, eight in number, are producing their usual quantity of tin. We sent our monthly parcel of tin to the smelting-house to-day.

ROMAN GRAVELS.—A. Waters and Son, Jan. 15: The 125 going of winze, north of new engine-shaft, is in a lode 5 ft. wide, worth 1 ton per fathom. The 125, south of same shaft, is worth 15 cwts. per fathom, but will be more productive soon. The rise in the 10, south of Blockley's winze, is up 6 fms. 2 ft. 6 in. lode worth 2½ tons per fathom. The stopes in this level north and south of Blockley's are yielding their usual quantities of lead ore. The winze in the 95 south going to meet the above-named rise is down 7 fms. 2 ft. 6 in.; lode worth 2½ tons per fathom. We expect to knock through to the rise in course of the next three or four days. The 95 south forebreast going forward on the ore course by side of the great footwall lode is worth 2 tons per fathom, the end being much more wet than usual. The stopes in this level are just as when last fully reported on. The 80 south, the pioneer end of the mine, is worth 2 tons per fathom, and improving. The winze below the 65, north of shaft, is worth 2 tons per fathom. We have omitted to say in order that the stopes along the 80 south are up to late valuations. We have sampled 100 tons lead ore, for sale next week.

RUSSELL UNITED.—John Bray, Jan. 15: I am glad to say we have passed through the hard bar of ground in the 57, at Stephens' shaft, which I referred to in my last. We shall now make better progress in the cross-cut. No change to notice in the cross cut north in the 127 at Matthew's shaft.

SOUTH CONDURROW.—William Rich, Jan. 15: There is nothing new to report since the general meeting last week, but on the whole the ends are looking a shade better.

SOUTH DARREN.—John Mitchell, Jan. 15: The 130 end west maintains the value given last week—3 ton silver-lead ore per fathom. In the same level driving east the branch of copper continues about the same, and there is now a little lead by the side of the copper. The winze in the 120 east is worth ¾ ton silver-lead ore per fathom, and the lode looks kindly. The two stopes in the 130 west are looking very well. No. 1 stope in the 110 west is very near exhausted. We have had a sharp frost here for the last few days but we can yet carry on most of the dressing. The 25 tons silver-lead ore sold on Jan. 9 realised 306l. 17s. 6d.

SOUTH PENSTRUTHAL.—S. Davey, Jan. 15: The 126 fm. level, driving west of Walton's engine-shaft—we have just gone through a cross-course, which has for the time disordered the lode, but in the last 2 ft. of driving the lode is looking a little better, and showing a little black copper ore. The ground west of cross course is harder than it was east; men making fairly good progress in driving The 170 fm. level, driving west of Flat Rod shaft—there is no change to notice since my last; ground hard, and showing a little ore.

SOUTH TOLCARNE.—J. Jennings, Jan. 13: The 87 west on Fraser's lode is looking better for copper ore, if it continues it will open up good tribute ground. The 80 cross-cut south—fair speed is making. We have intersected several branches, each containing tin; we have probably 3 fms. more to intersect the flat lode. In the 70, east and west of shaft on the flat lode there is nothing new to report—a strong tinny lode.—Taylor's Lode: The winze under the 24 had fallen off a little, but is again improving, worth for tin and copper 8l. per fathom.—Gossan Lode: In the 46, east of shaft, the ground is a little more spare for driving; lode composed chiefly of fluor spar, intermixed with yellow copper ore. In the 35 cross-cut south we have cut another branch containing rich tin. The new south branch east of cross-cut is looking well, worth 10l. per fathom for tin. Here we have not been able to do much this week, in consequence of the air being foul. As soon as the cross-cut is a little farther advanced, I hope to push on this lode east and west vigorously. All the machinery is in good working order.

STANDARD LEAD.—W. H. Bodase, Jan. 15: In stripping down the shaft on the east and west lode, below the 45, we have a very good lode, producing fully ¼ ton of lead per fathom. The No. 1 winze is suspended for the present, the men being engaged in the shaft. Lode looking well in eastern end of the winze. The lode in the 33, north and south lode, is worth 3 tons of lead per fathom. We shall start to-morrow to take down the walls of the lode in the engine-shaft. The 55 will open up profitable. The frost has been against dressing operations, otherwise I should have sampled to-morrow 20 tons of lead and 20 tons of blende, which I hope to do in a few days.

TRESAVEAN.—J. Prisk, W. Edwards, Jan. 12: We have completed the removal of 40 fathoms of the long drawing-lift, and have sent the drop lift 8 fms. below the 126, and forking is going on well. We find the shaft pretty clear, and expect to drain the mine rapidly.—Cunnack's Shaft: Fair progress is being made in driving the 24 east; the lode is 3 ft. wide, having a kindly appearance. We calculate to meet with the cross-course in about 3 fms.; and, judging from the level above, we have every reason to expect a good improvement when driven through as the ground at the east of it has generally been productive.—Wheal Boys Shaft—Caddy's Lode: The tribute pitches are looking fairly well, and some very rich tinstuff is being sent to surface, and stamping for our next parcel of tin is being proceeded with.

WEARDALE.—James Blenkiron, Jan. 10: Grove Rake: This mine is better laid open for stoping both as to waygates and ventilation than it has been since we commenced operations. The reserves are considerable. The frost has interfered with the ore dressing.—Greenlaws, Jackson's Level: The cross-vein main is without change, vein 1½ ft. wide. In Egglestone's rise the vein is 4 ft. wide (in alternate beds above quarry level, composed of fluor spar and carbonate of iron, with spots of ore, but not sufficient to value; we expect this will improve soon; set at 90s. per fathom. Tribute pitches are without change to note, but we have set a number of new lengths on tribute; we have 110 men raising ore in this mine. 22 at 20s., 22 at 28s., and 66 at 30s. per bing, in ground varying from 10 cwts. to 35 cwts. per fathom. The ground is now better laid open both for stoping and ventilation than we have had it heretofore, and we hope within a month to communicate with new foremost rise to Lowe's drift, wich will be a great advantage to working ground above Lowe's drift.—Burtree Pasture: In Donaldson's level the vein improves in quality as we leave influence of cross strength; vein 4 ft. wide, composed chiefly of fluor, spar mixed with quartz, spar and carbonate of iron, with spots of ore; we are daily expecting an improvement for ore, when we purpose rising Nattress Gill drift suspended for the present, and Wagh's rise holed to Garget's level. Ventilation very much improved.—Killhope: We hope to complete cutting out main sump-head next week. The Middle Grove cross-cut is in plate and grey beds; reset to eight men to drive next quarter at 92s. per fm.; other points unchanged.

WEST CARADON.—N. Richards, Jan. 14: Gilpin's lode in the 38 is about 1 ft. wide, producing stones of copper ore. The stopes in the back of the adit level on this lode will yield together 2½ tons of ore per fathom. A stope in the bottom of this level will yield 1 ton of ore per fathom.

WHEAL CREBOR.—H. Phillips, P. D. Holman, Jan. 13: Good progress is being made in driving the 156, west of new shaft, to reach the ore ground going down in the bottom of the 141. The lode in the 144 driving west of new shaft will yield 3 tons of copper ore and 3 tons of mundic per fathom. Our stoping ground in back of this level, Nos. 1, 2, and 3, will yield in the aggregate 24 tons of copper ore and 9 tons of mundic per fathom. The stope, east of winze sunk in the bottom of the 132, east of new shaft, will yield 7 tons of copper ore per fathom. The stope, west of said winze, will yield 8 tons of copper ore and 2 tons of mundic per fathom. The winze sinking below the 48, east of new shaft, will yield 1 ton of copper ore and 1 ton of mundic per fathom. All other points are without change.

WEST CREBOR.—J. Andrews, Jan. 14: The lode in the 95 west is 7 ft. wide, composed principally of quartz and capel, and carries a little copper ore and mundic on the north part, but not enough to value. As the lode in this end is now so large and spare for driving, we shall in future drive in the killas on the north side of the lode, so as to make better progress in driving. We shall at the same time carry 2 or 3 ft. of the north part of the lode, and cut throught it when we think proper. In the 80 west the lode is 3 ft. wide, and yielding a little copper ore and mundic, but nothing to value.

WEST GODOLPHIN.—F. Hodge, Francis Hodge, Jan. 13: Our bottom levels in the 92 on the course of the caunter are going out with fair speed without let or hindrance. The lode in each end is promising, and the country granite in the south-east end towards Pink, and killas north-west towards Bellingham's lode are highly congenial for mineral. The winze below the 80, on Pink, part continues to yield fine stones of tin. The stope in the back of the 80, on junction, is worth 7l. per fathom. The stope in the back of the 70 is worth 10l. per fathom. The lode in the 50 west is again in a run of paying ground worth 7l. per fathom. The lode in the 40 west is worth 7l. per fathom. Two stopes in the back of the 40 are worth jointly 14l. per fathom. The other bargains do not show any change for remarks since our last.

WEST POLBREEN.—William Vivian, Jan. 15: The engine-shaft is down to the 35. I now propose to drive a cross-cut north to intersect the lode. No change to notice in the 40 since last report.

WHEAL AGAR.—W. C. Trevena, Jan. 12: Setting Report: Weston's engine-shaft is sinking below the 235 by nine men and three boys at 6l. per fathom. The 225 is being driven east from shaft, by six men, at 10l. per fathom, and lode is worth for tin 20l. per fathom. A winze sinking below this level, by six men, at 12l. per fathom, is worth for tin 10l. per fathom. There are three stopes working in the back of this level, by 25 men, at 6s. per ton, where the lode is worth on an average 22l. per fathom. A rise in the 215, east from shaft, is worth for tin 8l. per fathom, and rising, by four men, at 6l. per fathom. The 215 cross-cut is being driven north, by nine men and machine, at 12l. per fm. We have three stopes working in the bottom of this level (215), No. 1, east of shaft, is worth for tin 12l. per fathom, and stoping, by six men, at 5s. 6d. per ton. No. 2, east of No. 1 winze, is worth for tin 25l. per fathom, and stoping, by nine men, at 5s. 6d. per ton. No. 3, west of No. 2 winze, is worth for tin 15l. per fathom, and stoping, by nine men, at 6s. per ton. The 205 is being driven east from shaft, by six men, at 9l. per fathom; this end is nearing the cross-course and in disordered ground, where the lode is of little value. The 205 is being driven west from winze, by four men, at 12l. per fathom, and lode is worth for tin 12l. per fathom. A winze sinking below the 205 is worth for tin 15l. per fathom, and sinking, by six men, at 13l. per fathom to hole. The 205 cross-cut is being driven south to intersect the south lode, by four men, at 6l. per fathom. A stope, east of No. 1 winze, is worth for tin 15l. per fathom, and stoping, by six men at 6s. 6d. per ton. The stope, west of this winze, is worth for tin 22l. per fathom, and stoping, by nine men, at 6s. per ton. A stope in the bottom, east of cross-course, is worth for tin 20l. per fathom, and stoping, by 12 men, at 5s. 3d. per ton of stuff. The 195 is being driven east from shaft, by nine men, at 12l. per fathom, where the lode is worth for tin 20l. per fathom. The 195 rise against the new shaft is rising, by nine men and machine, at 16l. per fathom. A stope in the back of the 195 is worth for tin 15l. per fathom, and stoping, by nine men, at 6s. per ton of stuff. A stope, east and west of winze, is working, by nine men, at 5s. 6d. per ton, where the lode is worth for tin 15l. per fathom.—South Lode: The 215 is being driven east of cross-course, by six men, at 10l. per fathom, where the lode is worth for tin 10l. per fathom. Our new shaft is being completed to the 150, and the shaftmen will now be employed in cutting plats at this depth.

WHEAL GRENVILLE.—F. Hodge, Jan. 13: In the 235 east end the lode appears to improve as we advance. The 190 east end is worth about 10l. per fm. The 178 east end is worth 7l. per fathom. The 165 east end looks more promising than for some time past. The 165 west end continues poor. The 150 east end is going out in a very promising lode, present value 10l. per fathom; we are making rapid progress in this direction, we drove last month 6 fms., and shall drive the same this month. The ends west of the western shaft are without any change to notice. We shall sell our usual quantity of tin on Thursday next.

WHEAL METAL AND FLOW.—W. Argall, S. P. Curtis, Jan. 14: During the past week operations have been retarded by the rough wintry weather, still we are making fair progress at surface in carrying out the various works. The walls of the account-house, smith shop, &c., are nearly complete. The men are getting on fairly in taking out the foundation for the engine-house. We hope to have the engine, stamps, and all materials on the ground in about a fortnight. As the water is quick, we do not propose to sink below adit until the engine and machinery are erected. The lode, as stated before, is fully 4 ft. wide, strong and masterly, containing tin and mundic, which are the elements for success in this lode. We shall fix stamps, so that we may tram in the tinstuff from the Flow, which will effect a great saving in the future, as there is such an enormous quantity of tinstuff to treat.

STEEL RAIL MAKERS' ASSOCIATION.—At the meeting of the English and International Steel Rail Makers' Association on Thursday the report showed that although the association is maintained for the regulation of prices of steel rails, the prices have been fixed so little above the actual cost of production that railway companies cannot expect to be able to buy cheaper, and prices indeed stand at a much lower average than those of the last few years. In the course of the proceedings Mr. B. Whitworth, M.P., on behalf of the subscribers to the association, presented the Chairman (Mr. Josiah T. Smith, of Barrow-in-Furness) with a silver dessert service in recognition of the success and ability with which he has presided over the affairs of the association since its establishment.

HARDWARE TRADE DIARY AND CASH BOOK.—Although presented gratis to the subscribers to Martineau and Smith's (Birmingham) Hardware Trade Journal the diary and cash-book bearing this title will be found exceedingly useful to those engaged in the trade. In addition to much useful calandar information, the diary is printed to facilitate the systematic records of engagements for the day, bills due, and accounts payable, so that business matters may be kept much more orderly.

WATSON BROTHERS MINING CIRCULAR.

WATSON BROTHERS,

MINEOWNERS, STOCK AND SHARE DEALERS, &c

1, ST MICHAEL'S ALLEY CORNHILL, LONDON

A short statement will answer several enquiries. Wheal Metal was formerly obtained for, and for a time formed part of Great Wheal Vor, which returned upwards of 2,500,000l. worth of tin, and made profits of 272,000l. Notwithstanding the heavy law-suits at Great Vor at Wheal Metal (to the south of Great Vor) a shallow discovery was soon made, and the tin returned from Metal shaft was 900t tons for about 500,000l., and about 100,000l. profit. At the 162 to the 174 fm. levels the lode was worth 600l. to 1000l. per fathom. Now the marked feature in this shallow discovery and ore-bearing district is a peculiar system of valley formation, with the abundance, as it is described to us, of water springs, cross-courses, and elvans. The ore at Metal shaft was discovered only 8 fms. deep in a bed of mundic, under which it continued rich 90 fms. deep without a break; then to the 174, which was worth 1000l. per fathom at the then price of tin. Now all these riches were discovered between two great cross-courses, the Metal shaft, from which the great riches were formerly made, being near to one, and Watson's shaft (of Metal and Flow Company) being near the other, and here, where it is now only 11 fms. deep, and upon which the engine is being erected, the lode has been found 5 ft. wide, with mundic containing tin. Capt. Argall, who was purser of Metal and Great Vor during their riches, and who, with Mr. Collins, obtained the grants of Metal and Flow after very long negociations, has the very highest opinion of this lode just found, and if it turns out, as we sink upon it through the mundic, as it did in Metal, our shares must make a very high price, and we are content to wait. Capt. Argall writes—"A level under this mundic, from present prospects, ought to give us something very good, and I expect it.

The Flow, we need scarcely say, is another affair altogether, beyond a speculation. The tin, enough to last for years, has only to be dressed and sold at a good profit. In reference to finances, we stated from the first that 1s. per share might be required for extra machinery. The profits on the Flow will more than pay the costs of Metal shaft, even supposing no discovery is made, and the water pumped from the shaft is necessary for dressing the tin in the Flow.

Since the above remarks were written in reply to several enquiries, we have received the following from the newly-appointed underground agent:—"I commenced my duties on Monday, Jan. 12, and yesterday was down and examined the Metal lode, which is about 4 or 5 ft. wide and has a very kindly appearance, and very strong in mundic; the men say here it is exactly like the top of Metal lode where it made the rich bunches of tin."

The dues at East Blue Hills are 1-18th, and the mine is held under the Duchy of Cornwall.

A fine discovery has been made at Wheal Kitty (St. Agnes), where, in the 154 east, there is a rich lode of tin valued at 80l. to 100l. per fathom. This is the deepest point yet seen in the district. The mine lies between West Kitty and Blue Hills and East Blue Hills, and we are informed this morning "the lode runs through the entire length of East Blue Hills." It is not the lode, however, we are working upon.

At West Francis the rise is being pushed up at the rate of 11 fms. a month. In six months' time it will be communicated with the shaft, when the returns will be largely increased. The manager of the mine is Capt. Josiah Thomas, of Dolcoath, and therefore we naturally infer that the best means for working the mine to advantage have been adopted.

TO THE METAL TRADE.

FOR COPPER, TIN, LEAD, &c., apply to—
MESSRS. PELLY, BOYLE, AND CO.,
SWORN METAL BROKERS,
ALLHALLOWS CHAMBERS, LOMBARD STREET, LONDON.
(ESTABLISHED 1849.)

HENRY NUTT,
BIRMINGHAM,
PURCHASER OF
LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, TIN ASHES, TERNE ASHES, AND ALL REFUSE CONTAINING TIN AND LEAD.

COPPER AND SPELTER COMPANIES
DESIRING TO
INCREASE their SALES and CONNECTION with Leading Houses, should send description, prices, and best Agents' terms to
HOWARD LANE AND CO.,
115, 116, PALMERSTON BUILDINGS, OLD BROAD STREET, LONDON, E.C.

HENRY WIGGIN AND CO.,
(LATE EVANS AND ASKIN),
NICKEL AND COBALT REFINERS,
BIRMINGHAM.

THE LEAD WARRANT COMPANY
(LIMITED).
RESERVE UNCALLED CAPITAL ... £29,365.
BANKERS: Messrs. GLYN, MILLS, CURRIE, AND CO.

The Company receive for storage at their Warrant Yard, in the Millwall Docks, PIG LEAD, for which STAMPED WARRANTS are issued, representing the amount of Lead deposited.
These Warrants are recognised and accepted by BANKERS as sufficient security to enable the holder to obtain advances on the Lead stored.
The Company do NOT make advances on Lead deposited with them.
Particulars may be obtained at the Offices of the Company.
CHAS. F. SMITH, Secretary.
6, Great George-street, Westminster, S.W.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JAN. 15, 1885.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde	2 2 3-	—
,, Scotch, all No. 1	2 3 0-	—
Bars Welsh, f.o.b. Wales	4 15 0-	4 17 6
,, ,, in London	5 5 0-	—
,, Stafford. ,, ,,	5 5 0-	6 10 0
,, in Tyne or Tees	5 0 0-	—
,, Swedish, London	9 0 0-	9 15 0
Rails, Welsh, at works	4 12 6-	4 15 0
Sheets, Staff., in London	7 0 0-	7 10 0
Plates, ship, in London	7 7 6-	7 15 0
Hoops, Staff., ,,	6 7 6-	—
Nail rods, Staff., in Lon.	6 5 0-	6 7 6
STEEL.		
English spring	12 0 0-	18 0 0
,, cast	30 0 0-	45 0 0
Swedish, keg	12 10 0-	—
,, fag. ham.	13 0 0-	14 0 0
Rails at works	4 10 0-	4 12 6
,, Light, at works	5 10 0-	5 12 6
LEAD.		
nglish pig, common	10 17 6-	11 0 0
,, ,, L.B.	11 0 0-	11 2 6
,, ,, W.B.	11 2 6-	11 5 0
,, sheet and bar	11 15 0-	—
,, pipe	12 5 0-	—
,, red	13 10 0-	13 15 0
,, white	14 10 0-	18 10 0
,, patent shot	13 15 0-	14 0 0
Spanish	10 12 6-	10 15 0
NICKEL.		
Metal per cwt.	— -	—
Ore 10 percent. per ton.	— -	—
SPELTER.		
Silesian ordinary brands	14 0 0-	—
,, special brands.	14 7 6-	—
English Swansea	15 5 0-	—
Sheet zinc	17 15 0-	18 0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b.	77 0 0-	78 0 0
,, bars ,,	78 0 0-	79 0 0
,, refined	79 0 0-	80 0 0
Australian	75 2 6-	—
Banca	nom. -	—
Straits	74 12 6-	—
COPPER.		
Tough cake and ingot	52 0 0-	53 0 0
Best selected	53 10 0-	54 10 0
Sheets and sheathing	56 0 0-	60 0 0
Flat Bottoms	59 0 0-	63 0 0
Wallaroo	nom.	
Burra, or P.C.C.	,,	
Other brands	nom. 54 10 0-	55 0 0
Chili bars, g.o.b.	48 12 6-	48 15 0
QUICKSILVER.		
Flasks, 75 lbs., war.	6 15 0-	6 17 6
PHOSPHOR BRONZE.		
Alloys I. and II.		£103 0 0
,, V.		110 0 0
,, VI. and VII.		125 0 0
,, XI.		100 0 0
,, Duro A, Duro B		96 0 0
BRASS.		
Wire	5¼d.-	
Tubes	7⅛ -	
Sheets	6 -	
Yel. met. sheath. & sheets	4⅞-5¼	
TIN-PLATES.*	per box	
Charcoal, 1st quality	0 19 0-	1 0 0
,, 2nd quality	0 17 0-	0 18 0
Coke, 1st quality	0 14 6-	0 15 0
,, 2nd quality	0 14 0-	0 14 6
Black, per ton	15 10 0-	—
Canada, Staff. or Gla. at Liverpool	12 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—At the commencement of the week our markets were rather more animated, and business was transacted at somewhat higher rates, but this better feeling has not lasted, and prices have again depreciated. The little spurt was due solely to speculative influences, and, therefore very little confidence was placed in its stability. Trade is in too dull and sensitive a state to revive so suddenly, and when so much exists to further the depreciation than take from it, and it may be a matter of question whether these little advances are for the permanent good of the trade or not. Of course, a few holders are enabled thereby to part with their stocks upon more advantageous terms, to make sales, perhaps, without losses, or, at all events, to save some of those enormous sacrifices which they have recently had to submit to, and so far so good, but it is very doubtful whether any further benefit is given to the market, and to any who deal in metals, while, on the other hand, there is a great deal of harm arising from these fluctuations and they invariably result in making the depression still more keenly felt, and reducing prices to a still lower level. The markets are thereby disturbed, and made unsettled; a few nervous traders hasten forward to secure their wants, and paying dearly for their purchases they find immediately afterwards that the markets have again receded to the points from whence they started. The great bulk of traders are not encouraged to buy, but, on the contrary, having little or no faith in the stability of prices, they withhold their orders for the reaction which invariably occurs, as it has done during the present week.

Manufacturers and others put up their prices temporarily against their customers, and whilst thus obtaining a limited number of orders at a shade better prices, the bulk of orders are either held in abeyance or placed with foreign and cheaper competitors. Further than this these little spurts rather encourage supplies, because suppliers become anxious to avail themselves of the somewhat better feeling while it lasts, and pour forth their supplies as heavily as possible, in the hope of realising improved rates. Again, when a little advance, such as occurred at the commencement of the week, specially noticed in copper, occurs, then the attention of speculators is momentarily directed to the market, they come forward and buy, and thus for a while still further enhance prices; but no sooner has this little spirited feeling spent itself out and it cannot be continued for long when trade is as bad as at the present time, then operators observing upon what small grounds they have based their purchases, and see how unlikely it seems that the markets will be sustained at once change their tactics and become anxious sellers, very often at much lower rates than what they effected their purchases. Thus they are not only losers by their transactions themselves, but the market is often still further reduced by the extra pressure to sell. Few have gained anything by the recent advance, and it is to be feared many have increased their already heavy losses. However, whilst there is no likely permanency in these little advances just now, yet at the same time every little feature of at all a favourable nature will doubtless be made the most of, as there is a vast interest in the advance of prices, and every possible encouragement will be afforded the slightest rise by holders; and as temporary advances may thereby often take place, consumers and shippers should evidently not delay executing those orders which are wanted for tolerably sharp delivery, otherwise they may find that when they are forced to buy the market is against them, a risk decidedly not worth running at the existing low range of prices.

COPPER.—A very strong tone characterised this market last Saturday, and business was done at advancing prices, and the improvement was still further marked on Monday, when up to 49*l.* 15s. was paid for sharp cash parcels of Chili bars. From this point there was a reaction, and the price fell away during the latter part of that day to about 49*l.* 2s. 6d., and on Tuesday the tone was a good deal easier at 48*l.* 12s. 6d., closing with more disposition to sell than to buy. On Wednesday the market was quiet, and the official price was quoted down to 48*l.* 10s., but yesterday, upon the announcement of good deliveries for the first part of this month—about 6000 tons—the market strengthened to the extent of 5s. for both cash and forward prompts, and a fair business was carried through; while to-day the Chili charters for the first half of January having been announced as 18,000 tons, the market has been irregular, and undecided whether to advance or recede, the ultimate results tending in favour of buyers.

The cause of the advance during the forepart of the week has to be attributed to rumours of difficulties having arisen with the employed in some of the copper mines in America. It is reported that owing to the present low prices of this metal notice have been given at some of the mines for reduced wages, and the men have in consequence determined to strike, whereby it is thought there may be some impression made upon future supplies, and operators, hoping to restore the market to a somewhat higher level, commenced purchasing, and a very short while succeeded in obtaining enhanced rates. But this better feeling did not last for long, and prices dwindled away again until yesterday, when more tone was implanted through the announcement, as we have already stated, of good deliveries. At the same time, whilst deliveries have been large the arrivals have been larger, and are said to be about 1000 tons in excess, so that statistically the market has not improved since the new year commenced.

IRON.—This market remains stationary, and, with the exception of some trivial and unimportant fluctuations in Scotch pigs, there is no change whatever to report. Business continues to be much restricted, and there is no prospect of increase yet awhile. For all branches of manufactured there is a special slackness in the demand, and buyers are not disposed to effect purchases for quantities beyond their most pressing and urgent requirements. There seems to be no soundness in the market, and, in face of easy prices, it is not at all surprising that buyers should limit their orders as much as possible, because delay only brings still more advantageous terms, arising from the excessive competition and other unfavourable features in the market. Shipping business is very slack, and the cutting prices is a characteristic far more noticeable in the export branch of the trade than in that for consumption. The export demand for all the foreign markets bears a semi-dormant condition, and there is not the slightest life or vitality for any description.

Business is also contracted for the raw material, particularly in the Staffordshire districts, but in Scotland the tone has slightly strengthened, and prices are somewhat higher. In drawing a comparison between the public stocks in Glasgow now and at corresponding dates of previous years the comparison is more favourable than it has been since 1881, whilst the price is also a good deal lower. But this feature does not attract the attention of speculators to the market, and speculative buying continues very inactive. The price is now about 1s. lower than what it was a year ago, and the stock in round figures is nearly 8000 tons less than what it was then. It is satisfactory to note there are seven furnaces less in blast now than there were at this time last year, but it still seems that the present rate of production is too large, for the public stock last week was slightly augmented, and the trade is evidently not in a fit condition for any increase in the stocks. The demand for makers' iron is still quiet, and there is no change to report in prices.

The Glasgow warrant market has been fairly steady and strong, and on Monday the price ranged between 42s. 2½d. and 42s. 4d., while on Tuesday there was a good business done at 42s. 4½d. to 42s. 5d., closing rather easier. On Wednesday the market was steady, and a fair business was done between 42s. 3d. and 42s. 2½, and yesterday there were the same characteristics in the market, a steady business being done between 42s. 4d. and 42s. 4½d., and the closing figure to-day is 42s 3d. The shipments last week were 7576 tons, against 8295 tons for the same week of last year, being a decrease of 719 tons, and which makes the total shipments for the whole of this year 17,943 tons, against 21,706 tons for the same time of last year, and 25,571 tons for the similar period of 1883. The number of furnaces in blast remains at 93, and the public stock has been increased by 47 tons, and now amounts to 579,617 tons, against 579,570 tons last week. The imports of Middlesborough pig-iron into Grangemouth last week were 3545 tons, against 4845 tons for the same week of last year, being an increase of 3700 tons, and which makes a total increase for the whole of this year compared with last of 12,835 tons.

Business at Middlesborough has been extremely limited in all its branches, and there is a somewhat despondent feeling with reference to the future of pig-iron, and the possible reduction in make fails to give any strength to the market, because buyers are anticipating a still more limited consumption. Orders are held in abeyance as long as possible, because prices, both from first and second hands, are easy, and in consequence, buyers naturally think they may be able to purchase more advantageously by delay. Second-hand lots of No. 3 are offering at 35s. 3d., and makers' price is 35s. 6d. to 35s. 9d. for prompt delivery, with about 3d. more for forward. The shipments last week were 15,600 tons, and the public stock was reduced by 180 tons. For manufactured the demand continues quiet, and bars are quoted at 5*l.* to 5*l.* 2s. 6d.; angles at 4*l.* 12s. 6d.; and ship plates at 4*l.* 17s. 6d. to 5*l.*

Business at Wolverhampton has been quiet, and only few orders have been received. Nevertheless, the tone has been fairly cheerful, and some of the cheap sellers of angles are tolerably full of orders, the price at which most sales have been effected being 6*l.* Although the general quotation for sheets for galvanising is 7*l.*, yet sales have been made at 5s. under that figure, and ordinary sheets can be purchased at 6*l.* 12s. 6d. per ton. The Birmingham meeting, yesterday, was very quiet, but a small business only was transacted. The specifications received were chiefly in fulfilment of old contracts, and fresh business was exceedingly limited. The principal demand has been for sheets, and a few sales have been effected in pigs. The closing of one of the works has had a depressing influence upon the market, and many of the employed have in consequence been thrown out of employment.

TIN.—A very fair business has been transacted in this metal, and prices have somewhat improved. They advanced during the first two days of the week, but receded on Wednesday, and afterwards again improved. Holders are evidently disinclined to make sales in any quantity at the present low rates, and this has given some tone to the market, and implanted more strength and confidence. The future is not considered very gloomy from reasons we have often brought under the notice of our readers. The only fear is lest any difficulties should arise from the slackness in general trade; but as this metal affords such a good medium for speculation it is more than probable that there will continue a little activity in the demand, and prices will continue to be regulated according as the feeling favours or is against an advance. It may be a matter of some surprise that the market has continued as steady as what it has for some time past, and it can only be attributed to the fact that there is little disposition to speculate in anything that has diverted attention almost altogether away from this market.

However, during the last day or two there has been more disposition to buy, with the result that the market has hardened and somewhat better prices have been realised. Not only has there been more doing for cash prompts, but sales for forward contracts have likewise been effected, and buyers have been fairly eager both for cash and forward, a feature which indicates confidence in the future. If forthcoming supplies continue as moderate as they have hitherto done and the deliveries continue to develope as they seem likely to do, judging from the past few years it is very evident that prices cannot be kept down for very long at their present low figures, but must advance according and in proportion to whatever increase there may be in deliveries over supplies.

SPELTER has been very quiet, with not much business doing at 14*l.*, which remains the quotation.

LEAD is flat, and business has been done down to 10*l.* 15s., at which there are now sellers, and we call the quotation 10*l.* 12s. 6d. to 10*l.* 10s., and the price of English is 10*l.* 17s. 6d. to 11*l.* per ton.

STEEL.—There is no change either in price or the state of the demand.

TIN-PLATES.—A moderate business only is doing, and for common cokes 14s. is about the quotation; but for large quantities somewhat less might be accepted.

QUICKSILVER.—Demand is slack, and the market dull.

The advance in the price of copper early in the week improved the MINING SHARE MARKET for a time, and caused a demand for shares in one or two copper mines at improved rates, notwithstanding that the settlement of the fortnightly account which was more than usually heavy, particularly in foreign gold shares, occupied the chief attention of the dealers. As copper again declined the market became weaker, and they leave off with very few changes from the closing prices of last week. Among shares most in demand have been West Frances, East Blue Hills, Wheal Crebor, Wheal Kitty, West Kitty, Killifreth, Wheal Basset, Dolcoath, Wheal Metal and Flow, Chile Gold, Balkis, Oscar, Orita, Santa Barbara, and a few others.

TIN keeps steady, but without any particular rise, and no change has yet been made in the standard for ore. In shares there has been very little doing, and quotations are mostly nominal. Cook's Kitchen have not been quite so firm, and leave off 13 to 14; Carn Brea, 1¼ to 1⅞; Dolcoath, 68 to 70. East Pool, 39 to 41; a dividend of 1*l.* is expected at the meeting. Killifreth more enquired for at ⅛ to 1; New Kitty, 1⅛ to 1¼; South Condurrow, 7⅞ to 8¼. East Blue Hills have been in fair demand, and leave off 5-16 to 7-16; the lode in the engine-shaft is now wider than the shaft, and worth 10*l.* to 12*l.* per fathom. The adit end east is improving, which the agents consider a most encouraging feature. South Frances, 7 to 7⅛; Tincroft, 5⅞ to 6¼; West Basset, 2 to 2⅛; West Kitty, 8¼ to 8⅜; Wheal Agars have advanced to 19⅛, 20½; Wheal Basset, 3⅞ to 4¼; Wheal Metal and Flow, ⅛ to ⅜.

Wheal Kitty (St. Agnes) have been in demand up to 30s., and leave off 1 to 1½. In the 154 east the lode has improved to 80*l.* or 100*l.* per fathom, and is regarded of considerable importance. From shallower levels the mine made large profits and good dividends, but for the last year or two the shares have been neglected, and almost unsaleable. The total amount of dividends paid by the mine exceeds 50,000*l.*, or 12*l.* 18s. 6d. per share, against 3*l.* 9s. paid by West Kitty up to the present time. Mounts Bay, 2s. to 3s.; Polberro, 2⅛ to 2⅜; South Crofty, 3½ to 4; South Kitty, ⅜ to ½; Tresavean, ¼ to ⅜; Trevaunance, 2⅛ to 2⅜; West Godolphin, ¾ to 1; West Polbreen, ⅛ to ¼; New Cook's Kitchen, ¾ to 1.

COPPER.—As anticipated last week, copper advanced 1*l.* per ton on Monday, and a considerable demand arose for low price copper shares; but the advance was not long maintained, business became more restricted, and prices declined. Bedford United, 1 to 1¼; Devon Great Consols, 1⅛ to 2; Gunnislake (Clitters), ¼ to ⅜; Mellanear, ¾ to 1; Prince of Wales, 3-16ths to 5-16ths; West Seton, 1⅛ to 2; West Crebor, 1-16th to ⅛; Wheal Crebors have been in demand, and advanced to ⅞ to 1¼, chiefly owing to the improvement which took place in copper on Monday, as there is at present no change in the mine. The points in operation are valued in the aggregate at 43 tons of copper ore and 15 tons of mundic per fathom. The 156 west has not yet reached the ore ground gone down from the 144. New West Caradon, 2s. to 3s.; West Caradon, 1s. to 2s.; South Caradon, ⅛ to ¼.

LEAD mines are little dealt in, and quotations are merely nominal. Vans, 9-16ths to 11-16ths; two of the directors have visited the mine during the past week, and they found everything in a satisfactory condition. The cross-cut in the bottom of the winze in the 135 is producing good stones of ore, the indications being an improvement upon the 120. The stopes in the old mine are also looking well. Great Laxey, 9 to 10; Roman Gravels, 3 to 3⅛; Weardale, 1 to 1¼. Leadhills, 1⅛ to 1⅜; the 10 north of No. 1 winze on Brown's lode has improved to 3 tons of ore per fathom. The stopes to 3½ tons. East Rose, 5-16ths to 7-16ths; New Langford, ⅛ to 3-16ths; Old Shepherds, ⅛ to ⅜; Standard Lead, 1 to 1⅛.

FOREIGN MINES.—Birdseye, ⅜ to ½; Balkis, 3-16 to 4-16. Bratsberg, ⅞ to 1⅛; the directors' report for the annual general meeting, to be held on Jan. 22, is about to be issued. It is understood that the manager's report on the mines is very satisfactory, and they consider the returns for 1885 should be at least as much again as they have been in 1884, while the costs will not be much increased. The ores sold for the year 1884 amounted to 1750 tons, against 1507 tons for 1883. The average produce of the ore was about the same in both years (20 to 21 per cent.), but the fall in the price of copper has made a difference of about 3150*l.* on the amount realised. The Norwegian profit for the year is 3964*l.* 12s. 11d. The net profit, after deducting freight charges on the ore and English expenses, is 743*l.* California Gold, ⅛ to ⅜; Columbian Hydraulic, ⅛ to ⅜; Corporation of South Australia, 1s. 6d. to 2s. 6d.

Callao Bis, ½ to ⅝; Cape Copper, 38 to 39; Chile Gold, ⅜ to ⅝; Colorado, 2½ to 2⅞; Copiapo, 2⅛ to 2⅜; Mysore, ⅞ to 1⅛. Santa Barbara, 1⅛ to 1⅜; cable advices show the produce obtained for the month of December as 3400 oits. of gold, of the estimated value of 1445*l.* Pitangui, 1000 oits., estimated at 425*l.* sterling. Frontino and Bolivia, ⅜ to ½; La Plata, 3-16ths to 5-16ths; Organos Gold, ⅛ to ⅜; Orita Gold, 1⅛ to 1½; Panulcillo Copper have advanced to 3⅛, and leave off 2⅞ to 3; Potosi, 11-16ths to 13-16ths; Richmond, 3⅛ to 3⅜; United Mexican, 3⅛ to 3⅜; Oscar Gold, ⅜ to ½; a telegram has been received stating, "Visible gold and splendid prospects at surface, opening on new lode about 20 fathoms from Oscar shaft." Montana, 1⅛ to 1⅜; New Emma, ⅜ to ⅝; Nouveau Monde, 2s. to 3s.; Ruby, ⅛ to ⅜; Schwab's Gully, 5½ to 6; Tolima A, 4 to 4½; Tolima B, 2 to 2½; Victoria Gold, ½ to ⅝; Western Andes, 4½ to 5; Indian Consolidated, ⅛ to 3-16ths.

The Market for Mining Shares on the Stock Exchange shows no material change as compared with last week. The general settlement passed off satisfactorily, and there appeared to be a good prospect of an improvement; but the heavy failures in America announced to-day have sent everything back, and the market closes excessively flat, it being virtually impossible to sell without submitting to a reduction, which few are disposed to accept. The metal markets remain in a very depressed state, copper having lost the little improvement discernible at the beginning of the week, and tin and lead are fully 3s. 6d. per ton lower. The want of support, notwithstanding the reported success of the concerns, the floating of which has been recently attempted, has thoroughly disheartened promoters, and nothing whatever can be done, and the growing feeling that a great crash is in the not very far future is not calculated to make matters better. The opinion that with the opening of the new year matters would brighten has been already disappointed, and the delay in monetary payments demanded from all quarters seems to justify the view that another dull year will have to be encountered.

Our usual telegram from Cornwall this evening says:—During the past week the Cornish Mine Share Market has been fairly strong, but without any large amount of dealings, although Wednesday's settling was larger than usual. The leading shares remain very firm, more especially Wheal Agar, with few shares offering. West Frances continues strongly held at an advance. Killifreths have attracted attention, but close easier. Both Wheal and West Basset are becoming more in favour. West Seton, after falling in price, again improved, owing to better prospects. At the meeting yesterday a loss of 1080*l.* was shown, and a total debit balance of 5400*l.* was reported. A call of 10s. per share was made. The price obtained for 60 tons of tin sold was affected 4*l.* per ton owing to the reduction in the price since last meeting. Attention was directed to the rise of 47*l.* per ton in dynamite, but it was stated that there were signs that the dynamite ring would be broken up. The death is announced of Mr. John Nicholas Richards Millett, of Boscawen, St. Just; he was formerly Mayor of Penzance, and contributed to the Transactions of the Cornwall Geological Society, and the Royal Institution of Cornwall.

Devon Great Consols shares have been in demand at 1⅛ to 1¼. The monthly sale of copper ores, 864 tons, will be made next Thursday. Satisfactory progress is being made in fixing the line of iron rods with the water-wheel at Gard's shaft, and it is expected that the whole of the pumping machinery will be at work at the Wheal Maria part of the mine in the course of the next fortnight, when the sinking of the eastern shaft will again be resumed, the manager states, in this very promising part of the company's property, and where important discoveries of ores are shortly expected. The 112 west, at Watson's part of the mine, has improved, now yielding 3 tons of copper ore and mundic per fathom.

Drakewalls, 3s. 6d. to 5s. 6d.; the sale of 12 tons of tin on Jan. 14 realised 507*l.* The lode in the engine-shaft and other points of operation maintain, the agent states, the value for tin as last reported.

Kit Hill, ⅛ to ¼; the Tunnel level has been driven during the last week 12 ft., and the manager states that the north engine-shaft is now nearly down to the 110, where driving will be commenced on the course of the lode for the purpose of effecting a communication with the big Tunnel level. In the meantime, he states, it is highly probable that profitably productive lodes will be met with as the tunnel is extended into this most promising tract of mineral ground.

South Devon United, ⅛ to ⅜; the agent states that 110 tons of copper ores have been sampled, and had the mines, he states, continued to have been worked all the time, the returns would have met the cost. The reorganisation of the company is progressing satisfactorily, and of the 20,000 shares to be subscribed for, with 15s. paid thereon, on the issue of such shares, leaving a liability of 5s. per share to be called up as required by instalments during the next 12 or, perhaps, 18 months, it is seen that more than half of the number of shares have been agreed to be taken, and in the course of next week the whole number is expected to be applied for.

Orita Gold, 1⅛ to 1⅜; the latest advices from this mine give an account of the passing of the water through the pipes to the point where washing on the gravel is to be commenced. This appears to have been effected in a more satisfactory manner than was expected in view of the enormous quantity and power of the water. The quantity of water would be about 20,000 gallons per minute, or (say) 30,000,000 gallons per day. The power is gained by a fall of about 150 ft. Washing on the gravel was, according to the report, to be commenced at Christmas, so that by the end of the current month a telegram ought to be received respecting the first results. The greatest confidence is entertained that these will prove satisfactory.

Ruby and Dunderberg, ⅛ to ⅜; the weekly report is again very encouraging with regard to the Lord Byron Mine. The quantity and quality of the ore is steadily increasing. The telegram received on Tuesday advises an improved output, 55 tons having been sent down from the mines during the week, and 93 tons sold to the smelters, the company's share of the proceeds amounting to $668. The adjourned meeting of the shareholders is to take place next Tuesday, when it is expected that the revised scheme for the reorganisation of the company will be unanimously adopted.

In LEAD MINE SHARES there is practically nothing doing, and the further decline in the price of pig-lead is anything but encouraging for sellers. Roman Gravels, 3⅛ to 3⅜; according to the agents' report this week the mine continues to look well, and 100 tons of lead ore have been sampled for sale next week.

Leadhills, 24s. to 26s.; and have been in demand. Considerable improvement has taken place in the mine this week in the 10 north,

where the lode is now worth 3 tons of lead ore per fathom, and in a stope south has also improved to 3¼ tons per fathom.

The Committee of First Mortgage Bondholders of the Oregon and California Railway Company regret to have to say that legal proceedings to foreclose the railroad are about to be taken in the interest of the Second Mortgage Bondholders. The committee have therefore thought it their duty to make arrangements for similar proceedings on behalf of the First Mortgage bondholders. A meeting will shortly be called.

The Sunderland Tramways Company's accounts for the half-year ended Dec. 31 show a net profit of 1475*l.* 7s. 10d., out of which the directors propose to pay a dividend of 3s. per share (being at the rate of 1½ per cent. per annum), and to create a reserve fund of 500*l.*, carrying 75*l.* 7s. 10d. forward.

The Railway Share Trust Company notify that the transfer books of the Bshares of the company will be closed from Jan. 19 to Jan. 31, preparatory to payment of the interest for the half-year ending Jan. 31.

Messrs. Gervers and Tallerman have opened an office in London for the registration of transfer and transactions of general business of the French and D'Esterre Diamond Mining Company, Bultfontein Mine, South Africa.

The numbers are announced of 399 bonds, amounting to 66,300*l.*, of the United Danubian Principalities Seven per Cent. Loan, 1864, for 916,000*l*, that have been drawn for payment at par on March 1 next, at the London agency of the Imperial Ottoman Bank.

LOCAL STOCKS AND SHARES.

The following table, giving a comparison of buying prices for the past five years, together with the highest and lowest prices during the last 12 months, has been compiled by Mr. S. N. CHALLONER, stock and sharebroker, Newcastle-on-Tyne:—

COAL, IRON, STEEL, &c.	Jan. 5, 1881.	Jan. 5, 1882.	Jan. 5, 1885.	Lowest and highest prices in 1884.
Barrow Steel	13 ... 11¾	... 6¾	... 5	... 8
ditto 6 per cent, Pref.	10¼ ... 10½	... 9¼	... 8⅛	... 9¾
Bede Metal	18 ... 17¾	... 10	... 10	... 15
Bolckow 20*l.* fully paid	29¼ ... 25	... 16⅞	... 15⅛	... 19¼
ditto 12*l.* paid	16⅛ ... 14¾	... 8⅞	... 8⅛	... 11¾
C. Cammell and Co.	72 ... 66	... 76	... 64½	... 80½
Consett Iron	24⅞ ... 25½	... 18	... 17	... 21¾
Consett Spanish Ore	29/6 ... 44/	... 75/	... 51/6	... 80/
Darlington Iron 10*l.* paid	— ... 60/	... 24/	... 15/	... 27/
Earle's Shipbuilding 45*l.* paid	15 dis....39 ½ dis.	... 32 dis.	... 36 dis.	... 24 dis.
Ebbw Vales	— ... 9¾	... 4⅞	... 3⅛	... 6⅜
John Abbott and Co.	45 ... 35	... 44	... 35	... 50
John Brown and Co.	— ... 61½	... 64	... 54⅜	... 66
Palmer's Shipbuilding& Iron—A	25½ ... 30	... 24	... 23½	... 27
ditto ditto B	19 ... 20½	... 14¾	... 13½	... 17¼
Pelsall Coal	— ... 12½	... 9	... 8¾	... 13
Sir W. G. Armstrongs	— ... 110	... 127½	... 120	... 130
Skerne Iron	4¾ ... 1¾	... 2/	... 1/6	... 2/6
Tees-side Iron	2¼ ... 1¾	... ⅝	... ¾	... 1
ditto Pref.	2¾ ... 2½	... 1½	... 28/3	... 36/3
Tharsis 2*l.* paid	7⅛ ... £7 11s.	... £5 2s.	... 5½	... 6⅞
Tyne Boiler	— ... —	... 5½	... 5½	... 8½
Tyne Forge	— ... 14½	... 5½	... 5	... 10¾
West Cumberland, 22*l.* paid	9½ dis.... 7½ dis.	...17¼ dis.	...18½ dis.	...12½ dis.
MISCELLANEOUS.				
Byker Bridge	11 ... 11¾	... 10¾	... 9¾	... 11
High Gosforth Park, 40*l.* paid	— ... 10 dis.	... 28 dis.	... 28 dis.	... 18 dis.
Jesmond Cemetery	22 ... 18	... 24	... 23	... 26
Langdale's Manure	2⅞ ... 3¼	... 2⅞	... 2⅞	... 4¼
Lawe's Manure	5⅛ ... 5¾	... 4½	... 4½	... 6
Do. 7 per cent. preference	10 ... 10½	... 10¼	... 9¾	... 10⅞
Newcastle Chemical	2¾ ... 25/6	... 17/6	... 17/6	... 43/6
Newcastle Commercial Insur.	15/6 ... 14/	... 10/	... 10/	... 15/6
Northern Maritime Insurance	5¼ ... 4¼	... 3¾	... 3¾	... 4⅛
Newcastle Grain Warehousing, 10*l.* paid	6 dis.... 7½ dis.	... 8½ dis.	... 8½ dis.	... 6¼ dis.
North-Eastern Bank	4¼ ... 5¼	... 6¾	... 6	... 6¾
Redheugh Bridge	10⅜ ... 12¾	... 12	... 11¾	... 12¼
Scotswood Bridge	74 ... 73	... 64	... 60	... 70
Sadler, B, 15*l.* paid	— ... —	... ¼ dis.	... ⅜ dis.	... 2¾ pm.
Tyne Steam S, 15*l.* paid	5½ dis.... ¼ dis.	... 1½ dis.	... 2 dis.	... ½ pm.
Tyne Wherry	— ... 19/6	... 15/	... 15/	... 20/

COMMERCE OF CENTRAL AFRICA.—An interesting address was given on Wednesday at the Liverpool Chamber of Commerce by Commander CAMERON, in the course of which he said that Tropical Africa, except on the Niger, the Congo, and some miles near the coast was as yet scarcely known to European traders. Owing to the difficulties of transport from the interior, only the most valuable productions would at present pay the cost of carriage, and so the first idea of every trader was to obtain ivory, unless he went for slaves. The reckless manner in which elephants were hunted would soon cause ivory not to be forthcoming in sufficient quantities to keep up the trade. The King of the Belgians had steadfastly and energetically put himself forward to promote the civilisation of the dark continent. Commander Cameron described various districts where rice and grain were now grown in abundance, and where the soil was so fertile that they had only to scratch the earth and Nature would smile on them. Referring to the Berlin Conference, he said that Prince Bismarck had called a Conference to consult about the future of Africa, and had invited to it not only the English, the French, and the Germans, who were most interested, but also representatives from the other side of the Atlantic, Danes, Russians, Turks, and others. He believed that all had not been such smooth sailing as had been stated. The two great points which this country had gained were Free Trade and the abolition of the slave trade by land as well as by sea. Free Trade in Africa was of great use to us. The International Free State, being empowered to raise revenue, might claim the right to put on export if not import duties, and also reserve the right to grant permission to people to trade in the Territories. The question should be watched, and the Consular agents instructed to take care that independent British traders should have permission to reside in the State properly secured to them. In dealing with Central Africa they had to remember that a great trade passed down to Egypt from the Upper Nile. It had been stated that when General Gordon was relieved the English Government would leave the country, where everything now was chaos. The speaker believed that if Ismail Pasha had been allowed to complete the railway from Suakim to Berber along the ancient route, they would not have had their present difficulties in the country, while the trade along the Upper Nile, which was becoming profitable to the Egyptian Government, would have been placed on a good footing. A vote of thanks was passed to Commander Cameron for his address.

ARMOURERS' COMPANY.—At a special court of this company, held their Hall, Coleman-street, on Wednesday, the honorary freedom of the company was conferred upon Sir Henry Bessemer, F.R.S., M.I.C.E. Mr. E. A. Pontifex, past Master, in introducing Sir Henry, said that such honours as the company had to confer were, perhaps, more commonly bestowed upon great statesmen and successful soldiers; but services rendered in those capacities were not altogether without alloy. Those of the man who conquered the forces of Nature to the use and for the convenience of mankind were, however, untainted. Such a conqueror was Sir Henry Bessemer. After making the usual declaration and subscribing the roll, Sir Henry Bessemer remarked that one of the greatest awards a man could have was that his labours for the general well-being were acknowledged by his fellow-countrymen. Nothing of late had given him greater satisfaction than the announcement that this old and well-established guild had determined to elect him as one of its honorary freemen. Subsequently a banquet was given, when the Master (Mr. E. J. Barron) presided. After the usual loyal toasts had been duly honoured, the Master, in proposing "The Health of Sir Henry Bessemer," said that whether they regarded him as the greatest armourer of the age, or whether they looked upon the services he had rendered to the country, he was sure he was entitled to the highest honour they could pay him. His greatest invention was the process of converting crude melted iron into steel by simply blowing a column of air through it for some 15 or 20 minutes, and that without any fuel except that which had been used for melting the iron. Since the process was successfully worked, the production of steel had amounted to no less than 25,000,000 tons, and he might add that one steel rail was capable of doing the work of three iron ones, while the difference in cost was comparatively trifling. In responding, Sir Henry Bessemer said that to be signalled out among the scientific men in London by this company and offered their freedom, was a mark of respect which he duly and fully appreciated. He then sketched the history of the invention of his referred to by the President, and concluded by expressing the gratification it gave him to be present, and that in the future he should feel he had the honour of being one of the Armourers of the City of London. Other toasts followed, including those of "The House of Commons," "The Iron and Steel Institute," "The Lord Mayor and the Corporation," and "The Master and Wardens." During the evening a selection of vocal music was performed under the direction of Mr. Montem Smith and Mr. Horscroft.

THE PROGRESS OF NEWPORT.

The Official Statistics of Trade for the year 1884 have just been published, and they show most remarkable progress in regard to Newport. For years past Cardiff has taken the lead in the returns of both coal and iron; but since increased dock accommodation has been provided at Newport, and great improvements have been carried out in the River Usk, there has been a close race between the two ports in connection with all the leading staple trades. The figures for the last 12 months indicate that Newport is progressing at a rate greatly in advance of any other South Wales port. Its shipments of coal to foreign countries in the year reached 1,721,512 tons, as against 1,581,463 tons in 1883, which is an increase of 9 per cent. Cardiff, on the other hand, secured an increase of barely 3 per cent. in the year, while Swansea showed a falling off of 4 per cent. In the shipments of coal coastwise—that is, to the various markets of the United Kingdom—the progress of Newport was still more significant, its total clearance having reached 1,031,540 tons, as against 977,495 tons in 1883, or an increase of 6 per cent. Cardiff, on the other hand, shipped 980,432 tons last year, as against 1,038,696 tons in 1883, being a decrease of 5 per cent. Swansea also showed a decrease of no less than 11 per cent. In iron and steel exports the figures for the three ports in the past year were as follows:—Newport, 108,572 tons; Cardiff, 83,199 tons; and Swansea, 4979 tons. In the imports of iron ore, and other produce, Newport also takes the lead, and, as the foregoing figures show, it is also at the head of the other Welsh ports in the shipment of coal coastwise, and the exports of iron and steel. With the new railway openings to the Rhondda Valley and other districts, and the great development which is going on on both sides of the River Usk, and also the extension of the Alexandra Dock, there is every indication that Newport will soon outstrip all the other South Wales ports, and will become the chief mart of commerce in the Bristol Channel.

OSCAR GOLD MINE.—The following telegram has been received from the manager:—"Visible gold and splendid prospects on surface; opening on new lode about 20 fms. from Oscar shaft." The complete particulars of the second crushing have not yet been received.

INDIAN CONSOLIDATED GOLD.—At an extrordinary general meeting on Wednesday the special resolution, unanimously passed at the extraordinary general meeting on Dec. 20—"That the directors be, and they are hereby, authorised on behalf of the company to purchase, acquire, or take on lease, or otherwise, any lands, together with the buildings, machinery, material, and mining plant thereon, situated in the Colar Gold Fields, in the territory of Mysore, India, the possession, use, or occupation of which they may consider beneficial or advantageous to the company, upon such terms for such period or periods, and for such estates or interest therein as they may think fit."—was confirmed.

TREHARRIS COLLIERY ACCIDENT.—At the enquiry respecting the death of Francis Wright, Thomas Sheen, Evan Hughes, and Evan James, held by Mr. Thomas Williams, evidence was given by John Dodds to the effect that he, together with the deceased, was descending the No. 2 shaft on Dec. 12 in a wooden box with four bridles, one at each corner. In descending they kept their hands on the guide ropes, when suddenly the rope connected with the box snapped, and all but witness, who clung on to the guide rope, were precipitated to the bottom, and killed instantaneously. After considerable evidence had been given as to the condition of the rope the Coroner summed up, in the course of which it was admitted on all sides that the rope when new was a thoroughly good one. After nearly an hour's deliberation the jury returned a verdict to the effect that the deceased died through falling down No. 2 shaft of the Harris's Navigation Colliery, consequent upon the breaking of a defective rope.

WHEAL LUSKY.—At the general meeting, on Thursday (Mr. E. Nicolls in the chair), the accounts showed a debit balance of 125*l.*, while the arrears of call were 228*l.* It was resolved that the operations on the mine be suspended for a month until some of the calls for arrears are paid, and a special meeting of the shareholders was afterwards held, when all shares in arrear of more than one call were declared to be forfeited, and the purser was instructed to take proceedings against all persons in arrear.

"PUBLIC OPINION" says:—With the New Year the *Mining Journal* commenced "Scientific Recreations for Practical Miners," by its editor and manager—Mr. Edward David Hearn, M.A., D.C.L.—a series of "short, popular, instructive papers for working miners," but which, to judge from the first, will be acceptable to working men in all branches of industry, and to many general readers.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, has been:—Bahia (Limited), Ordinary, 24⅞ to 25¼; Bombay (Limited), 6⅝ to 6¾; ditto, New, 5½; Brentford Consolidated, 212; British Gas Light (Limited), 41¼ to 42; Buenos Ayres, New, (Limited), 12⅞ to 13¼; Commercial New Stock, 191 to 192; Continental Union Seven per Cent. Preference, 32½; Gas Light and Coke A, Ordinary, 219 to 223½; ditto, B Four per Cent. Maximum, 85¼ to 87; ditto, C D E, Ten per Cent. Preference, 238 to 238¾; ditto, F Five per Cent. Preference, 115½ to 116½; ditto, H Seven per Cent. Maximum, 148 to 150; ditto, Six per Cent. Debenture Stock, 153; Imperial Continental, 202 to 203½; Maurituis (Limited), 1¾; Metropolitan of Melbourne Five per Cent., 1908-1910, 104½; Monte Video (Limited), 16¼; Oriental, New, 7⅞; Para (Limited), 4¼ to 4⅞; Rio de Janeiro (Limited), 21⅝ to 22¼; San Paulo (Limited), 13⅞; South Metropolitan, A, 255; ditto, B, 220 to 223. Gas Light and Coke have improved about 3 per cent. Imperial Continental about 1 per cent. Foreign companies easier.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—Alliance British and Foreign, 37½; Alliance Marine, 24 to 25¼; Atlas, 15¼ to 16¼; City of London Fire (Limited), ½; Commercial Union, 16¼ to 16½; Employers' Liability Assurance Corporation (Limited), 2; Fire Insurance Association (Limited), 1¾; Guardian Fire and Life, 63½; Imperial Fire, 153½; London, 51 to 51¾; Marine (Limited), 26⅞ to 27; North British and Mercantile, 27 to 27⅝; Ocean Marine, 5¾ to 5⅞; Phœnix, 220 to 221; Rock Life, 7; Royal Exchange, 398; Merchants' Marine (Limited), 1¼; National Marine (Limited), 1 11/16 to 1⅜; Railway Passengers, 7 13/16 to 7 15/16. Insurances little change.

GOLD AND SILVER.—Messrs. PIXLEY and ABELL (Jan. 15) write—The only export of gold during the week consists of 60,300*l.* in coin and bars to the River Plate, there being no demand for any other quarter. The arrivals comprise 5,000*l.* from Sydney, 17,000*l.* from West Indies, 19,000 from Brazils; total, 41,000*l.* The transactions at the Bank comprise an influx of 36,000*l.* bars and a withdrawal of 10,000*l.* sovereigns. The silver market has been very quiet and without much variation in price. For two or three days after the issue of our last circular the rate remained at 50d. per oz., but yesterday the amounts from the West Indies and the Brazils were placed at 49 15/16d., and the quantity in the Chili steamer has to-day been sold at the same rate. We have received 29,000*l.* from New York, 11,500*l.* from West Indies and Brazils, 47,000*l.* from Chili; total, 87,500*l.* The P. and O. steamers have taken 65,000*l.* to India. The quotations for bullion are—Bar gold, fine, 77s. 9d. per ounce standard; bar gold, containing 20 dwts. of silver, 77s. 10½d. per ounce standard; bar silver, fine, 42 15/16d. to 50d. per ounce standard; bar silver, containing 5 grs. of gold, 50 5/16d. per ounce standard; cake silver, 54d. per ounce; Mexican dollars, 48 11/16d. per ounce; quicksilver, 6*l.* 10s. to 6*l.* 15s.; discount 3 per cent.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 10	—Foxdale	100	£ 9 2 0	Sheldon, Bush, and Co.
13	—Lisburne—Glogfawr	40	8 5 0	Panther Lead Co.
,,	—Glogfach	30	7 8 0	ditto
	—Cwmystwyth	20	6 8 0	ditto
	—East Darren	27	10 0 0	ditto
15	—Great Holway	30	9 6 0	Walker, Parker, & Co.

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Member of the Redruth Mining Exchange.

Those who wish to buy or sell any mining shares should consult Mr. JAMES. Mr. J. devotes his entire attention to home and foreign mines, and places his special information at the disposal of his clients. That mining offers undoubted advantages for quick returns no one can deny. Look at the enormous sums of money paid in dividends by home and foreign mines. A large number of wealthy families owe their present proud positions to adventuring in LEGITIMATE MINES. With a better price for metals many of the smaller priced shares would immediately advance some hundreds per cent.

VICTORIA also OSCAR GOLD SHOULD BE BOUGHT AT ONCE.

There are many mines worth attention, as proceedings of recent shares holders' meetings prove beyond doubt. During the last 40 years there has no such opportunity presented itself as the present for investment in British mines. Metals are certain to advance. In well-informed circles no doubt is entertained on this point. Buyers must not further delay orders.
See Selected List published by S. JAMES, 14, Angel-court, London, E.C.

SPECIAL BUSINESS in the following or part:—

25 Bedford United, 24s	50 West Crebor, 2s. 6d.	100 La Plata, 5s.
30 Carn Camborne, 5s. 6	5 West Kitty, £3 12s. 6	100 Last Chance, 1s.
50 Collacombe Con., 2s 6	25 West Poldice, 4s. 6d.	100 Lisbon-Berlyn, 16s. 6
25 Devon Con., £1 10s.	50 West Phœnix, 5s. 6d.	10 La Trinidad, £5 5s.
70 D. Friendship, 2s. 3d	20 Wheal Kitty, 23s. 6d.	10 Mason & Barry, £9 1/8
25 Drakewalls, 2s. 6d.	10 Wheal Basset, £4.	50 Montana, 26s.
40 East Blue Hills, 7s. 9	40 Wheal Crebor, 21s.	25 Mysore Gold, 21s. 3d.
25 Ecton, 31s.		10 New Emma, 11s.
50 East Wh. Rose, 7s. 9	50 Asia Minor, 3s. 6d.	90 Nouveau Monde, 2s. 6
15 Frongoch, 8s. 9d.	75 Akankoo (f.p.), 4s. 9d.	100 Nundydroog, 7s. 3d.
100 Goginan, 1s. 6d.	250 Balkis, 4s. 9d.	50 Nine Reefs, fully paid, 3s. 6d.
10 Great Laxey, £9¾.	25 Bratsberg, 20s.	
50 Gunnislake (Clit.) 7s 6	57 Cartago, 15s paid, 9s.	50 Oscar Gold, 15s. paid, 13s.
20 Great Holway, 13s. 9	100 Cartago, fully paid, 10s.	50 Oscar Gold, Vendors' Shares, 20s. 6d.
75 Home Mines Trust, 18s.	100 Cankim Bamoo, 1s. 6	20 Organos, 11s. 6d.
20 Killifreth, 18s.	10 Copiapo, £2¾.	50 Orita, 28s.
100 Kit Hill Gt. Cons., 6d	30 Canada Copper, 4s.	50 Potosi, New, 16s. 9d.
20 Kitty St. Agnes, 22 6d	50 California Gold, 5s. 9	76 Port Phillip, 2s. 3d.
50 Leadhills, 26s.	50 Callao Bis, 11s. 6d.	10 Panulcillo, £3 3/16.
90 Mounts Bay, 2s. 6d.	200 Chile (New), 16s. pd., 14s. 6d.	100 Ruby (Old).
50 New Kitty, 26s. 3d.		50 Ruby (New), 4s.
100 New Wt. Caradon, 2s 3	50 Chontales, 2s. 9d.	15 Richmond, £3 11s. 3d
50 Old Shepherds, 11s. 6	80 Colombian Hyd., 13s 9	20 Rio Tinto, £13 12s. 6d
20 Phœnix United, 26s 3	100 C. 8th. Austr. Cop., 2s	7 Schwab's Gul., £5 11 3
50 Polberro, 45s.	100 Denver Gold, 2s.	40 Spitzkop, 10s.
20 Prince of Wales, 4s. 9	100 Eberhardt, 3s. 6d.	100 Tacquah, 1s. 9d.
80 Parys Copper, 1s.	2 El Callao, £67.	50 Tocopilla, 2s. 6d.
20 Roman Gravels, 65s.	50 Frontino, 10s. 6d.	11 Tolima A, £4½.
50 South Caradon, 7s. 6d	50 Glenrock, 2s. 3d.	50 Transvaal Gold, 11s. 6
50 S. Condurrow, £3¼.	55 Gold Coast, 4s.	20 U. Mexican, £3 15s.
20 South Darren, 5s. 3d.	100 Hoover Hill, 4s. 6d.	100 Tambracherry, 5s. 6d.
10 South Frances, £7½.	100 Indian Consol., 3s. 3d	110 Victoria Gold, 12s. 6d
50 Tresavean, 6s. 6d.	20 Javali, 4s.	100 West Callao, 3s. 6d.
30 Trevaunance, 45s.	100 Kohinoor B, 3s. 9d.	
50 Van, 11s. 6d.	77 Kapanga, 1s.	

*** S. JAMES can buy or sell any of the above shares. Correspondence invited. Trustees, executors, and others will find their duties considerably lightened by submitting schedule of shares held to Mr. JAMES, who will return the same by next post with market values attached.
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HORACE J. TAYLOR,
38, GREAT ST. HELEN'S, LONDON, E.C.

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Special information and business in all mines in the United States of Columbia—Tolima, Western Andes, Colombian, and other gold and silver mines in that country.

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BUSINESS in all DESCRIPTIONS of STOCKS, MINING and other SHARES.
ESTABLISHED 1869—BANKERS: ALLIANCE (Limited).

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ESTABLISHED UPWARDS OF FORTY YEARS.
MESSRS. WATSON BROTHERS, in referring to their public Circular in the *Mining Journal*, would also observe that they BUY and SELL SHARES at the *nett* market prices of the day in all well-established and respectable Mining Companies; also, in English and Foreign Funds Railway Stocks, &c.

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NEW ILLUSTRATED CATALOGUE of High-Class Watches and Clocks at Reduced Prices sent Post Free on application to E. DENT & CO., Makers to the Queen, 61, Strand, London, W.C.; or 35, Royal Exchange, E.C.

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SPECIAL IMPROVED PLOUGH STEEL,

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For Colliery, Mining, Agricultural, and General Purposes.

ROPES FOR ÆRIAL TRAMWAYS,

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Care is given to ensure the Ropes being constructed in the way most suitable for their particular work, and by the use of specially selected and tempered metal, the greatest possible uniformity is obtained.

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RHENISH CONSOLIDATED MINING COMPANY (LIMITED.)

TO BE SOLD—LEAD, ZINC, COPPER, and IRONSTONE MINES, included in twenty-four Concessions, together with the PLANT, ENGINES, PUMPING MACHINERY and MATERIALS on the Madonna Lead Mine, the whole situated north-east of Cologne, Rhenish Prussia.

For full particulars of Mines, Concessions, Plant, and Machinery, apply to Mr. J. D. THOMAS, 1, Coleman-street Buildings, Moorgate-street, London, to whom offers must be addressed.

BY ORDER OF THE LIQUIDATORS.

ELIGIBLE INVESTMENT.

DEVON GREAT UNITED COMPANY, LIMITED, *IN LIQUIDATION.*

TAVISTOCK, DEVON.

MESSRS. WARD AND CHOWEN have received instructions to SELL, by PUBLIC AUCTION, on TUESDAY, 20th January, 1885, at the Bedford Hotel, Tavistock, at 4·30 o'clock P.M., the WHOLE of the

PLANT, MINE MACHINERY, AND MATERIALS,

The property of the Devon Great United Company (Limited), which will be offered as a going concern, in One Lot, consisting of:—

56 in. cylinder pumping engine, 14 in. rotary engine, 24 in. winding ditto, 10 ton boiler and outfit, 8 ton ditto ditto, 22 in. Cornish crusher with attachments, capstan to 14 in. engine, 1 twelve-head stamps (complete), 5 balance and angle bobs, poppet heads, shears (complete), 8 whim pulleys and stands, single-power winch, 44 fms. of 3 in. Wi. rods, 60 fms. of 13 in. capstan rope, 210 fms. of wire rope, 30 fms. of ¾ in. chain, bell and stand, wood launders, 1 3 ft. 12 in. door-piece and door, 3 ft. 6 in. sheave, 2 pairs 22 in. yokes (3½ by 1½), 6 ft. weighing beam and weights, 10 in. air compressor, wood shed to same, wood carpenter's shop and contents, wood sheds and dressing floors, wood flooring, wood jigging hutch, picking table, 4 13 in. bucket prongs, cog wheels, about 1½ ton of new iron, about 3 tons of old scrap ditto, screw stocks, smith's bellows, anvils, smith's and miner's tools, an assortment of screwing tackle, Brunton's calciner with wheel (complete), 7 hoppers and arsenic kilns, 4 skips, 190 fms. of skip road, 90 fms. of 14 and 11 in. plunger lifts (complete), 78 fms. of 14 and 11 in. main rods, with strapping plates and bolts (complete), 3 13 in. 9 ft. pumps, 1 12 in. working barrel, 12 9 ft. 12 in. flat-bottom windbores, and other pitwork. Also a quantity of explosive and general stores, together with the household furniture and effects of the office, &c., &c.

The sett is a very comprehensive one, embracing grants from His Royal Highness the Prince of Wales, Earl Fortescue, Rev. F. T. B. Willesford, and others, and is leased on moderate royalties, for a term of 21 years from 1850.

It is bounded on the east by the Devon Great Consols, at a point near the great deposit of ore, the lodes from which mine run into and intersect this sett at its longest part. This mine has proved very productive, and returned thousands of tons of ore, and is considered to be one of the best mineral properties in the west.

The property may be viewed upon application to the Captain at the mine.

Conditions of sale, and further particulars may be had either of the Auctioneers, residing at Burnville, Bridestowe, Devon; Messrs. G. H. BARBER and SON, Solicitors, of Founder Hall, 13, St. Swithin's-lane, London; or to

Messrs. J. LANGTON and W. H. ALLEN,
65, Cheapside, London, the Liquidators.

Dated Burnville, Bridestowe, 24th December, 1884.

MONMOUTHSHIRE.

Midway between Blaenavon and Brynmawr.

SALE of VALUABLE STEAM COAL COLLIERY, known as

MILFRAEN COLLIERY,

Situate on the Brynmawr and Blaenavon Section of the London and North-Western Railway.

MR. JAMES STRAKER has been instructed by the Mortgagee TO SELL, BY AUCTION, at the King's Head Hotel, Newport, in the county of Monmouth, on THURSDAY, the 5th day of February, 1885, at Three o'clock in the afternoon, the foregoing

VALUABLE COLLIERY PROPERTY,

Called Milfraen Colliery, lying within easy reach of the shipping ports of Newport and Cardiff, and having, by means of the London and North-Western Railway (with which it is connected by a branch line), ready access to Liverpool, London, and all parts of the kingdom.

The coal consists of the celebrated Elled and Big, with the option of taking the Horn and Bydelog seams of steam coal. The area of the Elled vein (unworked) is about 30 acres; of the Big vein, 172 acres; and of the Horn and Bydelog about 537 acres.

The royalties are very moderate. The property is leasehold; held under the Blaenavon Company (Limited) for a term of 32 years from 25th December, 1879.

Full particulars, with plan and conditions of sale, may be had on application to the Auctioneer, 2, Tiverton place, Abergavenny; to J. WORTON, Esq., Agent for the Mortgagee, Blaenavon; to Messrs. JAMES FRAZER and SONS, 2, Token-house Buildings, London, E.C.; to Messrs. ASHURST, MORRIS, CRISP, and Co., 6, Old Jewry, London, E.C.; or to Messrs. GABB and WALFORD, Solicitors, Abergavenny.

VALUABLE AND NEARLY NEW

MINING PLANT AND MACHINERY,

COMPRISING:—

PORTABLE 25 horse power BOILER, by Hathorn; two portable multitubular donkey pumps, by Mumford; 16 horse power driving engine and drum; 140 fathoms of steel rope; head stock; pulleys; powerful air compressor, by Hathorn; 20 feet by 4 feet air receiver; two patent Eclipse rock drills and bits; hydraulic tunnel and column; smith's forge, bellows, and fittings; leg and bench vices; two 10 feet by 6 feet tanks; and a quantity of piping, tubing, and hose.

MESSRS. INMAN, SHARP, and HARRINGTON WILL SELL the above, BY AUCTION, at the Roman Gravels Boundary Lead Mine, Hope, near Minsterley, Salop, on THURSDAY, January 22nd, 1885, at One precisely, in Lots under a Bill of Sale.

May be viewed, and catalogues had at the Mine; of Messrs. NASH and FIELD, Solicitors, 12, Queen-street, Cheapside, E.C.; and of the Auctioneers, 16, Abchurch-lane, E.C.

MINE "EL CALLAO," GUAYANA, VENEZUELA.

32,200 SHARES.

Gold in bars produced in the month of November, 1884, remitted to Messrs. Baring Brothers and Co., London—12,459·20 ozs.

DIVIDEND distributed for each Share, 20 francs.

(Signed) A. LICCIONI, President.
(Signed) VICTOR J. GRILLET, Treasurer.

Notices to Correspondents.

AVIS IMPORTANT—AUX ABONNES ETRANGERS DU MINING JOURNAL.—Le prix de l'abonnement au *Mining Journal* pour tous les pays de la CONVENTION POSTALE INTERNATIONALE est de (1*l.* 8*s.*) 36 frs. le port compris. L'abonnement est payable par anticipation, ou par mandat postal international ou par autre mandat sur Londres. L'abonnement continuera sauf avis contraire.

GERMAN SUBSCRIBERS.—Any subscription terminating at the end of the current year can, if preferred, be renewed by remitting to our office 1*l.* 8*s.* by international postal order; but the preferable course is to obtain it through the German Government. Every German Post Office is authorised to receive subscriptions for the *Mining Journal*, so that the subscriber has merely to give notice at the Post Office nearest his residence, and the prompt and regular supply will be guaranteed.

ABBONAMENTO POSTALE AL MINING JOURNAL.—Il prezzo delle associoni è per tutti gli Stati della Convenzione postale 1*l.* 8*s.* (36 frs.) al anno—pagamento anticipato. L'invio de Vaglia postale internazionale essendo più comodo e sicuro é sempre preferibile a qualunque altro mezzo. Le lettere ed i reclami devono essere inviati franchi e leggibilmenti scritti alla Direzione del *Mining Journal*. Nessuna communicazione potrà essere publicata se non quando abbia, per guarentigia particolare della Redazione la firma e l'indirizzo del Corrispondente. Non si restituiscono i manoscritti. Richiami e combiamenti d'indirizzo devono avere unita la fascia in corso sotto cui si spedisce il Giornale.

OSCAR MINE.—Having heard it is said that we have been sellers of vendors' shares in the above mine, we beg to state that we have never sold a share of the 17,500 in our possession. We have too much faith in the mine to sell any of them.—SMITH AND THOMMESEN: *Arendal, Norway.*

Received,—"J. S. M." (Liverpool): It did not come to hand or it would have been carefully attended to—"J. J. T." (Chontales): The sole omissions were a few inadmissible adjectives, and the last paragraph, which was too personal for insertion. The latter omission was indicated by points. The others would have been, but that to have printed "all accusations contained in his —— letter of Dec. 31," for example, might have created an erroneous impression as to the word which had been omitted—"G. G. B." (Liverpool); Answered by post—"G. E. and Co.": Attended to.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JANUARY 17, 1885.

COLLIERY EXPLOSIONS IN 1884.

The official record of the number of deaths from colliery explosions during the past year has just been published. It is eminently satisfactory in every respect. It not only shows that the deaths have been far fewer than any previous year for the last 30 years; but that there has been a steady decrease in such catastrophies, the result of more careful management and scientific skill and prudence. So far as can be ascertained the number of deaths which occurred during the past year was 52; and, if we take the number of persons employed in our mines as 500,000, this would give one life sacrificed for every 9825 persons engaged—a by no means large percentage, considering the dangerous nature of the avocation, the enormous quantity of coal now raised, and the increased depth of the workings. The collieries became subject to Government inspection and supervision in 1850, and for the four following years the average yearly number of deaths in our mines was 91, whereas for the four years ending 1884 the average yearly loss of life was rather less than 30. In the year 1873 the number of persons employed in mines was 514,149, and the deaths by accidents 1069; in 1882 the number of persons engaged in mines was 503,428, and the deaths by accident 1129; whilst in 1884 the number of persons engaged in our mines was, in round numbers, 500,000, and the number of deaths only 52.

Whilst it is satisfactory to find so marked a diminution in the number of explosions and the loss of life in the kingdom generally, it is significant that Wales is responsible for no less than six explosions, causing 37 deaths. We have recently heard a good deal about the attempted prohibition by the Home Secretary of shot-firing in the pits of South Wales. Deputations of eminently practical and scientific men have recently waited upon his lordship urging the serious inconvenience such prohibition would cause, and praying that such should not be carried into effect. On the other hand, the Government Inspectors persist in their assertions that such prohibition is absolutely necessary for the safety of the colliers, and that what is known as the lime process can be as easily carried out in Wales as in other parts of the kingdom, where the colliers now prefer it over the powder and shot method. The final decision of the Home Secretary awaits the result of some practical tests which are being made. Such being the case, it is only right to state that on Jan. 14, 1884, 14 persons were killed in the Pen-y-Graig Colliery, South Wales, by an explosion, and Mr. WALES, the Government Inspector, distinctly stated in his evidence before the Coroner that this explosion was entirely due to shot-firing—that he had previously recommended that shot-firing should be strictly prohibited in all the steam coal collieries of South Wales, and if his recommendations had been carried out no such explosion would have taken place. Again, on Nov. 8 last 15 men were killed in the Pochin Colliery, near Tredegar, South Wales, and in the House of Commons the Home Secretary stated that the Government Inspector had written to him to the effect that this explosion had also occurred through shot-firing. Here, then, are 29 deaths entirely due to shot-firing out of a total of 37 in the South Wales district for the past year, and yet there are those who can see no danger in the method so largely adopted, and who would continue the practice, notwithstanding its proved danger and the repeated warnings of the Government Inspectors.

The happy immunity which the country enjoyed from colliery explosions and loss of life during the past year conclusively proves that the proprietors and managers are now fully alive to their duties and responsibilities, and do not require the whip of more inspectorship to induce them to adopt every known means for the safety of the men. The use of powder should be strictly prohibited by the Home Secretary, and then the practical management and care of the collieries may be safely entrusted to the properly certificated managers. The proprietors have long since recognised the fact that explosions are in many instances traceable to defective lamps, insufficient ventilation, or reckless carelessness on the part of the working collier. Hence they would gladly adopt any standard safety-lamp, and would willingly submit to such safety-lamps being strictly enforced. They are also quite prepared to provide adequate ventilation in every working place in the colliery, and to enforce strict observance to the rules and regulations for the safety of the men. Under the most favourable circumstances the responsibilities of the colliery proprietors are grave and onerous, and the avocation of the collier dangerous; and the fact that only 52 lives were lost last year is irrefragible proof of the desire of the proprietors to provide the best known means for safety, and the skill and care of the managers in carrying out underground operations.

Whilst we can scarcely expect to see any further material decrease in the number of deaths in our coal mines it is satisfactory to know that science is being rapidly brought to bear in the working of our pits, and consequently the saving of life. Atmospheric variations have probably more to do with explosions than is generally recognised, and the lessons which have been practically learned from the careful and scientific reading of the barometer cannot be ignored. During the past year 31 warnings were given, and of this number out of 17 explosions 13 warnings proved correct. Of this number 15 explosions causing deaths occurred with a high or rising barometer, two explosions with a low or falling barometer, whilst four occurred when only very slight atmospheric changes were observable. It does not seem to be definitely settled whether a high or rising barometer or a low or falling barometer is more favourable to colliery explosions. The previous year also proved that the large number of deaths occurred with a rising barometer; whilst, in 1881, with a high pressure 45 lives were lost, and 54 lives with a low barometer. Whilst scientific knowledge is thus being gradually brought to bear upon our colliery working, managers on their part should carefully watch gas accumulations during periods of atmospheric changes, and take precautions accordingly. The official records of the small number of lives lost during the past year is the best proof which could be given of the skill and care with which our vast colliery operations are carried out, and shows there is no necessity whatever for further official inspectorship or more State interference.

SCOTCH PIG-IRON WARRANT MARKET.

Mr. W. WILSON (Glasgow, Jan. 15) writes:—The warrant market has been steady and somewhat firm. There is very little buying for outside account, yet the heavy stock presses but lightly on the market, an indication that warrants are well held, and that prices will advance quickly as soon as trade prospects improve. Shipments for the week are small, and do not compare favourably. There is no change in the number of furnaces blowing: 52 tons were put into store here last week, while 190 tons were taken out at Middlesborough. Business was done during the past week at the following prompt cash prices:—

Thursday, Jan. 8.		Friday, Jan. 9.			Monday, Jan. 12.		
42/4, 42/5, 42/4	...	42/4½, 42/5, 42/3½		...	42/3, 42/2½, 42/4		
Tuesday, Jan. 13.		Wednesday, Jan. 14.			Thursday, Jan. 15.		
42/4½, 42/5, 42/4	...	42/3, 42/2½		...	42/3, 42/4½		
		1885.		1884.	1883.		1882.
Price of Scotch Warrants, Jan. 12...		42/3½	...	43/9	...	49/2	... 51/9
Furnaces in blast in Scotland do. ...		93	...	100	...	109	... 106
Iron in store at this date		579,537	...	587,586	...	605,103	... 629,383
Shipments of Scotch pig-iron for week ending Jan. 10		7,401	...	9,295	...	8,396	... 5,767
Do. since beginning of year.....		17,773	...	21,656	...	25,571	... 18,765
Price of Middlesbro', No. 3, Jan. 12.		35/3	...	36/3	...	42/6	... 43/3
Furnaces in blast Middlesbro' dist.		93	...	117	...	120	... 115
Middlesbro' Iron Imported at Grangemouth, week ending Jan. 10		3,545	...	4,845	...	7,328	... 5,810
Do. do. since beginning of year		25,380	...	13,025	...	13,663	... 16,328

FOREIGN MINING AND METALLURGY.

The condition of the French Iron Trade continues discouraging. Orders remain scarce and there are no symptoms of any impending revival in affairs. Prices remain at their lowest level, a quotation of 5*l.* 12*s.* per ton for iron being admitted everywhere without discussion on the part of makers. In Germany also the condition of affairs is sombre, and orders have continued scarce, although there is a fair amount of employment on railway account. Prices have not varied, ordinary refining pig having remained at 2*l.* 1*s.* per ton, and casting pig at 3*l.* per ton. Bessemer pig has been maintained at 2*l.* 8*s.* per ton. Iron has sold at about 5*l.* 12*s.* per ton, but some contracts have been concluded at lower rates. Boiler-plates have not sold below 8*l.* per ton. The steelworks of the Rhine have taken a contract at Ruhrort for 18,220 steel sleepers at 6*l.* 6*s.* per ton. The Union of Dortmund has contracted to supply 1313 tons of rails at 6*l.* 16*s.* 3*d.* per ton, while the Horde Works have undertaken to deliver the same quantity at 6*l.* 16*s.* per ton. The Bochum Company has shared 1446 tons, at 7*l.* per ton, with Herr Nother, of Mainheim. At Gluckstadt the Hosch Steelworks have taken 1450 tons of rails at 7*l.* 2*s.* 2*d.* per ton, while the Union of Dortmund has obtained an order for 1050 tons at 7*l.* 3*s.* 2*d.* per ton. Krupp, of Essen, has undertaken to deliver 3150 tons of steel rails at 7*l.* 7*s.* 7*d.* per ton; and, finally, the Steelworks of the Rhine have shared 3400 tons with the Osnabruck Company at 7*l.* 5*s.* per ton.

The new year does not open very encouragingly in the Belgian Iron Trade, but if orders do not further decline in importance it appears probable that the winter will not be attended with insurmountable difficulties. As compared with 1883 the production of pig in the Charleroi basin has now been reduced to the extent of about 6000 tons per month; this ought to exert a beneficial influence upon the general situation. Prices have remained at about their former level upon the Belgian markets. English pig has been held at 2*l.* 2*s.* 6*d.* per ton; No. 1 iron has made 4*l.* 10*s.*; No. 2, 4*l.* 16*s.*; and No. 3, 5*l.* 2*s.* per ton. Girders have ranged between 4*l.* 14*s.* and 4*l.* 18*s.* per ton. Plates have sold at 5*l.* 16*s.* for exportation, and 5*l.* 18*s.* on home account. No. 2 has made 6*l.* 14*s.* per ton; and No. 3 8*l.* 6*s.* per ton. The imports of iron minerals into Belgium in the first 11 months of last year were 1,392,158 tons, as compared with 1,472,455 tons in the corresponding period of 1883. The exports of iron minerals from Belgium in the first 11 months of last year were 178,055 tons, as compared with 341,836 tons in the corresponding period of 1883. The exports of steel rails from Belgium in the first 11 months of last year were 52,304 tons, as compared with 62,884 tons in the corresponding period of 1883. The exports of iron rails from Belgium in the first 11 months of last year were 17,789 tons, as compared with 8663 tons in the corresponding period of 1883.

The Belgian Coal Trade has been maintained with steadiness, and it may be added that recent cold weather has had the effect of increasing the deliveries of household coal. The enquiry for coal for metallurgical purposes has been weak. The imports of coal into Belgium in the first 11 months of last year amounted to 1,108,480 tons, as compared with 1,146,851 tons in the corresponding period of 1883. In these totals English coal figured for 1,108,480 tons and 1,146,851 tons respectively. The imports of coke into Belgium in the first 11 months of last year were 30,520 tons, as compared with 32,122 tons in the corresponding period of 1883. It will be seen that the imports of both coal and coke experienced a small decline last year. The exports of coal from Belgium in the first 11 months of last year were 4,255,166 tons, as compared with 4,031,777 tons in the corresponding period of 1883. In these totals the exports to France figured for 4,009,594 tons and 3,767,962 tons respectively. The exports of coke from Belgium in the first 11 months of last year were 783,505 tons, as compared with 918,312 tons in the corresponding period of 1883. It will be seen that there was an appreciable decline in the exports of coke last year, with at the same time a not altogether unimportant increase in the exports of coal. The general aspect of the German coal markets has not varied, and prices have remained about stationary. Unless unforeseen circumstances of an unfavourable character should arise, the German coal trade appears likely to present a fairly good tone for some time to come.

SERIOUS RESULTS OF THE DEPRESSION IN THE NORTH OF IRELAND IRON TRADE.—The general depression in trade in Belfast has at length extended to the iron and metal manufacturing interests. The "checks" of about 150 men in the various departments of the Falls-road Foundry (Messrs. Combe, Barbour, and Combe's) were stopped on Friday night last, and all were paid off on Saturday. Upwards of 1600 mechanics were employed, 1800 hands having been employed working throughout its departments until lately; but the proprietors having extended their branches a few years ago were enabled to lessen the number of workers in the Falls Foundry. The men paid off number 11 out of the moulding shops, about 50 out of the five turning shops, 45 fettlers, 30 labourers, and 15 carpenters. The following are the weekly rates of wages that have been paid to the men now affected:—Moulders, 24*s.* to 30*s.*; turners, 1*l.* to 30*s.*; chippers and fettlers, 9*s.* to 11*s.*; labourers, 11*s.* to 13*s.*; and carpenters from 28*s.* to 30*s.* Mr. Barbour acts as manager of the foundry, and Mr. M'Quinity as assistant manager. The men admit that within the last five years their wages have not been reduced, and attribute the present turn of affairs to a general dulness affecting the iron trade seriously, and especially foundries like this, which supplies not only many kinds of machinery to the linen trade of Belfast but locomotive and other classes of steam machinery to railway companies and shipbuilding concerns. None of the smiths and platers have been at present thrown out.

STEEL FOR UNDERGROUND COLLIERY PURPOSES.—A novel feature, which may lead to a large demand for steel for underground colliery purposes, has been introduced by the Darlington Forge Company, who are executing considerable orders for large sections of channel steel, to be used for roof beams in the place of wood in pit workings, and steel props are also being made for supporting the roofs. The first cost of steel for beams and props is of course in excess of the wood supports at present used; but an ultimate saving will be effected in that they can be removed for further use without damage, which to a very large extent is not the case with wood, whilst an additional and very important advantage is secured in that much less space is occupied as compared with the heavy timbering now required, and a better working headway in the mine is obtained.

REPORT FROM CORNWALL.

Jan. 15.—Prospects continue to be regarded hopefully, and there seems no reason why anticipations should not ere long pass into realisation. At the same time we must be prepared to see some adverse individual changes if an improvement is not speedily made. Thus, nearly the whole of the men employed at the once famous Great Work were thrown out of employment on Saturday. Unless Breage comes to the rescue, therefore, with Wheal Metal and Flow, at the present rate of depression mining in the Helston district, now little more than a shadow of its former self, will soon be but a name, and this is by no means an isolated case. There is hardly a district that has not its mine or mines, which, like West Poldice, has apparently reached very nearly the end of its tether. On the other hand, it is equally true that there is not a district which has not its almost certain prospective successes. So far as tin is concerned it seems, however, certain that somewhere between this and midsummer, materials will be afforded for a more definite forecast than any at present possible. If it should then appear that a substantial advance is out of the question it will be only an act of self-protective wisdom on the part of the adventurers in mines, where the margin between the cost of producing the metal and the standard is considerable, to give up attempting to make both ends meet. It would be better no doubt in not a few cases to spend capital in new ventures altogether than in trying to bolster up old ones.

We do not, however, make these remarks in any spirit of despondency. There is nothing in any of our recent mine meetings to cause discouragement, so far as they and concerns similarly situated are concerned. Quite the reverse. West Basset undoubtedly has been disappointing; but even there we were told that the coming quarter would be very different to the past; and with very few exceptions, indeed, this is the tale that most of our established mines have to tell. How far it is possible still further to reduce working expenses it is difficult to say. Wages cannot be much, if at all, lower; but materials might be cheaper, and dynamite especially, were it not for that noxious ring; and we cannot help thinking that there is room for considerable improvement in methods of dressing. But that will take time to work out.

Some points of interest in connection with the mineral resources of the West, but more particularly of Devon, were brought out a few days since at a scientific conversazione held in connection with the Plymouth Institution. Among the articles exhibited was a fine collection of rare minerals, including a number of specimens of gold and gold quartz, &c., from various parts of the world. Some of the specimens were from Cornwall, and Dr. Oxland, in commenting upon them, expressed the opinion that gold, of course in small quantities, was much more generally diffused in the rocks of Cornwall and Devon than was commonly thought. He pointed out also the almost absolute identity of character between some of the gold-bearing rocks of America, particularly the diorites, and other rocks of the two countries. Hitherto gold in the matrix has been of very rare occurrence in the West; but it is quite possible it has been overlooked to a very large extent, though it may not exist in paying quantities. And it certainly is a fact that there are wide areas of Devon not generally recognised as mineral-bearing in either a commercial or a scientific sense that are much more productive in both than has been usually believed.

Another kindred subject treated of at the same meeting was the development of the potteries of Devon, which were spoken of by Mr. Worth in connection with a collection of local pottery, including some of the choicest examples of the Plymouth china made by Cookworthy. Specimens of that quaint form of local art and ornament manufactured in North Devon for well nigh three centuries, now known as Barnstaple sgraffits, and the more modern developments—the beautiful Devonshire faience, and the choice glazes of Aller. Great as has been the advance of late years made in the utilisation locally of the abundant and very varied clays of Devon, it can hardly be said that much more than a beginning has been made, while so far as Cornwall is concerned, practically nothing has been done beyond the manufacture of the china-clay refuse into bricks and fire-resisting goods. Among all the exhibitions that have been held in the West, there has never yet been one to illustrate fully and clearly the mineral products of Cornwall and Devon—their character and uses, showing the raw material in its various states, the chief purposes to which it is applied, and specimens of all the local manufactures depending thereon. But it would be as valuable as it would be interesting.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Jan. 15.—The Coal and Iron Trades of Derbyshire have now got into their ordinary state and the men all round are fairly employed, more especially those connected with the collieries. Since the commencement of the year there has been a better demand for house coals, and the change in the weather has rather intensified it. Prices have also become firmer, but they have not reached the point that might be expected for the time of year, and considering the low rates which prevailed during the summer months, which, however beneficial to the miners, did not allow of profit to the owners. Silkstone large coal can now be purchased at from 8s. to 10s., and the top hards at from 7s. to 8s. per ton. Steam coal has not improved since last notice, although some few colliers send a little to Hull for exportation. As yet not much has transpired with respect to the new docks at Boston, which appear to be specially adapted for the shipment of coal, whilst there is a direct run from Nottingham with the easiest of gradients, seeing that it is intended to empty vessels to bring timber from the Baltic to Boston, there should be no difficulty in sending out cargoes of coal to the timber ports. This is the case with vessels running from the Humber to some parts of the North of Europe, and there is no doubt a similar arrangement could be made with respect to the port of Boston. Not so much steam coal, it may also be said, is now going to some of the railway depots as was the case before Christmas, although the consignments are about the average for the time of year. The furnaces are also taking about their usual quantities, but there is not so much going to London and the South. In gas coal rather more has gone away of late, so as to keep up stocks that had fallen during the holidays. In other kinds of coal no change has taken place.

The Iron Trade has commenced tolerably well, although it is the reverse of active. The production of pig is now something like what is was at the close of last year, although scarcely so much is going away in its raw state to Staffordshire and Lancashire for the mills and foundries. In finished iron the prospects are tolerably bright, whilst the productive power is now much greater than it was. The large foundries are keeping their men fairly employed, although this may be considered the dullest part of the year, for not so much is generally done in pipes, for which the Staveley and other works are noted. In some other kinds of heavy castings, however, a fair business is doing. Malleable material has also gone off tolerably well in light and ornamental castings, which are now turned out at Derby as well as at the old and noted establishments at Dronfield.

In Sheffield the works as yet have not all been opened out to their workmen, but it is expected that next Monday will see them all manned. But trade has not opened out so well as might have been anticipated from the apparent activity which prevailed up to the commencement of the holidays. But the fact is employers gave out more work than there were orders for, so as to give the men the means to tide over the time that the works were closed. As regards cutlery of all kinds, the demand is quiet, but it is expected that before long America will send some fair orders after the long season of quietness which has prevailed. The home markets, however, are likely to be quiet unless there is a sudden revival of trade generally throughout the country. Some of the makers are fairly off for machine knives, and the requirements of machinists are now likely to increase, for orders are already being received for light implements, such as lawn mowers and chaff cutters.

The make of both Bessemer and crucible steel has not been so heavy so far, but the prospects are encouraging. One or two firms are fairly off for rails, but they are mostly for home lines, as our Sheffield makers cannot compete for foreign orders with those who have their works close to shipping ports. It is expected that there will be in the early part of the year a rather brisk demand for crucible steel for heavy castings for ordnance, as well as plates for armour purposes. In ordinary ship and boiler plates no change has taken place, the demand being still the reverse of active. Makers of cast-steel wheels have done very fairly of late, and the year promises to be a good one for them, seeing that mineowners in particular find it to their advantage to have them instead of the old kinds, that required constant repair and frequent renewals. In the tool department there is nothing new to report, for as yet not much is doing in the lighter or heavier kinds. Railway wagon builders have been well employed for months past, and they have commenced the year well, being able to find all their hands plenty to do.

In South Yorkshire the Coal Trade has kept up well, and the pits in most cases are kept fully going. The demand, of course, is principally for house coal, but at the same time a full average of steam sorts are going from the district to Hull and other places.

The strike at the Denaby Main Colliery continues, although efforts have been made to bring it to a close. The Unionists receive support from the Association they are connected with, but as the non-Unionists are forced to beg for support they are not likely to remain long out. The strike consequently is not likely to last for any length of time.

TRADE OF THE TYNE AND WEAR.

Jan. 15.—There is not much change to notice in trade here since the opening of the year, although there are some hopeful signs. It was noticeable last week at the opening of the Newcastle Exchange, that there was an amount of energy and enquiry which has not been noticed for a long period. There is a good demand for steam coal at the moment. It is pleasing to know that a considerable part of the steam tonnage which has been loading Welsh steam coals for some time has returned to the Tyne lately. Baits are held out to catch steamers at the Welsh ports, and some good points are, indeed, offered which confer some advantage; but if the shipowner is saddled with the odious Bunker Coal Clause, all the advantages offered are thoroughly neutralised. The demand for bunker coal is good and likely to increase. It is surprising to observe from the Board of Trade returns the enormous consumption of bunker coal, which goes on and which must still advance as the steam navy of the world expands in ordinary and progressive times. The steamer bunker coal trade over the kingdom far exceeds the whole of the exports oversea of coal sent from the Tyne ports alone for 1884 even for all kinds. The quantity of coal shipped for the use of steamers engaged in the foreign trade for 1884 was 6,619,934 tons, and in 1883 it was 6,390,194 tons, being an increase of 229,740 tons.

The returns of the accountants under the sliding-scale in the Northumberland coal trade have been published, from which we learn that the net average selling price of this coal for the three months —September, October, and November, 1884—was 5s. 1·39d. per ton, their being an increase of 5·39d. per ton upon the standard average selling price of 4s. 8d. per ton fixed in the agreement of March 9, 1883. The present rate of wages for underground workmen and banksmen will, therefore, be reduced by 1¼ per cent., calculated upon the present standard wage.

In Durham the collieries are, on the whole, fairly employed; the demand for gas coal is, of course, excellent at present, and that for house coal, which has been so very small owing to the mild winter, is now improving rapidly with the appearance of severe wintry weather. The best coking collieries will now move steadily forward, many of them having sold their produce for the year forward, in some cases at slightly advanced rates, so that any sensible advance in the iron trade must at once act on the coke trade.

The Iron Shipbuiding Trade continues in a very dull state, and must continue so for some time to come. It is true that orders have been received at some of the yards for new vessels, and there is a good deal of repairing work in hand. An arrangement has been made with the shipyard hands for the reduction at the proposed rate of 7½ per cent. for most kinds of work in connection with these works. Some good orders for marine engines have also been received in these rivers, some of the engines ordered being of large size. The triple expansive engine for marine work continues to excite much attention here, and some good engines of this type are now being constructed at some of the high class works. On Saturday evening last a paper was read by Mr. Alex. Taylor before the members of the Newcastle Association of Foremen Engineers and Draughtsmen on this engine.

The Quarterly Meetings of the Iron Trade this week in the different centres do not seem to have brought any particularly increased demand or improvement. It is too early in the year for buyers to be attracted, especially as there is no incentive to purchase, there being little chance of any upward movement in prices before the spring sets in, they are consequently holding back. Sellers, too, in the North of England are not anxious, as in most cases they are fairly booked for the next two months. Merchants are offering a little iron at lower rates: they are not selling much, however, mostly small lots for shipment, and the makers are disposing of very little iron indeed. The shipments are going on very favourably so far this month, the deliveries up to last night being 17,846 tons, and for the week ending yesterday 14,286 tons. The heavy addition to stocks made last month will, probably, not be repeated this month, as there will be a larger local consumption, owing to no stoppage by holidays. The feeling at the Quarterly Meeting and since, is not altogether an unhopeful one, and there are many who look for some better conditions to arise later on in the year. The chances, however, would appear to be against anything like any revival in the iron trade for shipbuiiding, upon which so much dependence, is placed in the North of England, will probably be more or less slack. The manufactured iron trade begins the year quietly, with but limited enquiry, and no change in prices, which are about:—Bars, 5*l.* 2*s.* 6*d.*; angle iron, 4*l.* 12*s.* 6*d.* to 4*l.* 15*s.*; ship-plates, 4*l.* 17*s.* 6*d.* to 5*l.*; boiler-plates, 6*l.*, less 2½ per cent.; puddled bars, 3*l.* 5*s.* net. The rates of pig-iron are about 35*s.* 3*d.* to 35*s.* 4½*d.*, with merchants for No. 3, while the makers quote 35*s.* 9*d.* to 36*s.* 3*d.* for early delivery. In each case 3*d.* to 6*d.* per ton more is asked forward. No. 4 forge is 33*s.* 9*d.* to 34*s.* The steel trade, it is considered, promises better, as there have been more enquiries on foreign account, and a larger output of steel plates is taking place at the North of England works.

At Hartlepool there has been a strike of shipbuilding operatives against a reduction, and the employers of Stockton have laid off their yards from the same cause. It is hoped that a speedy settlement will be effected. The wages of blast-furnacemen and Cleveland miners have been reduced by the late accountant's return in a small degree. The coal trade has been rather quieter except in the steam and gas departments; prices are unaltered. Coke shows no change, prices being about 8*s.* 3*d.* to 9*s.* at the ovens for furnace sorts.

The estimated output of ironstone from the Cleveland mines during 1884 amounts to 6,000,000 tons. In the previous 12 months the output was 6,756,055 tons, the largest on record, so that last year shows a decrease of about 756,000 tons. The year's shipments of pig-iron at Middlesborough show that 927,496 tons were forwarded coastwise and foreign, as compared with 992,815 tons during the previous 12 months. The shipments during December amounted to 69,202 tons, of which 38,045 tons went to Scotland, 9468 tons to England and Wales, 9390 tons to Germany and Holland, and 12,299 tons to other foreign countries. The quantities sent to foreign countries during the 12 months amounted to 510,238 tons, and coastwise 417,258 tons; total 927,496 tons. This is a decrease of 65,319 tons, as compared with the previous 12 months. The estimate of the production of Cleveland pig-iron for the past 12 months is that 1,710,000 tons of Cleveland pig-iron, and 770,000 tons of hematite, basic, and speigel have been made in the Cleveland ironmaster district, or a total of 2,480,000 tons. Last year the production of Cleveland pig-iron amounted to 1,855,508 tons, and 905,232 tons of hematite, speigel, and basic iron, or a total of 2,760,740 tons. This shows a reduction of 280,740 tons in the make as compared with that of 1883.

☞An appeal case against the rating of machinery was heard at the Northumberland quarter sessions on Dec. 9. The appellants were the Tyne Boiler Works Company, and the respondents the overseers of the poor of Longbenton. The case is a test case The appellants in the action are being supported by a powerful combination of manufacturers, while the respondents are also backed by a combination of the Poor Law Unions. This question of rating machinery and also mines has long occupied the attention of all parties concerned. It was ultimately agreed that the Court would grant a special case for the higher courts. Of course, in the present case the decision of the Court was entirely against the appellant. It is fully intended to carry the appeals up to the House of Lords if necessary, so that it is hoped some solution of this vexed question will be found. It must be noticed that the immediate cause of this combined action on the part of the ratepayers is that a new valuation list has lately been issued, and if the action of the Union is not checked the result to manufacturers and others will be very serious.

REPORT FROM LANCASHIRE.

Jan. 15.—With the exception that the recent cold weather has brought forward a better demand for house fire classes of fuel the condition of both the Coal and the Iron Trades of this district continues depressed. In the iron trade there is no indication of improvement, and the absence of any weight of business coming forward at the Quarterly Meeting has, if anything, tended towards a less hopeful feeling, and although makers do not openly quote lower prices there is, if anything, a weaker tone in the market. The actual business doing is still only small, but there are fair enquiries, which would possibly lead to considerable transactions if makers were disposed to entertain the offers put forward, which are mostly for long forward delivery at very low figures. Makers are showing more willingness to book over the first half of the year, and even longer, but in most cases they show a strong determination to hold back from pushing business at the low prices which buyers apparently have in their mind. For Lancashire pig-iron, delivered equal to Manchester quotations, remain at 41*s.* to 41*s.* 6*d.*, less 2½, and good district brands average about the same; but there are some sellers who would take 40*s.* to 40*s.* 6*d.*, less 2½, delivered here to secure orders. Hematites, if anything, are rather easier. For some of the best brands of foundry sellers hold to 51*s.*, less 2½, as their minimum for delivery equal to Manchester; but 53*s.* to 53*s.* 6*d.*, less 2½, is being taken readily in most cases. In the finished iron trade orders come forward very slowly, and some of the local forges are only very indifferently employed. A few of the leading makers still hold out for 5*l.* 12*s.* 6*d.* for bars, delivered into the Manchester district, but 5*l.* 10*s.* represents about the figure at which orders can be placed, with local made hoops quoted at 6*l.*, and sheets at 7*l.* per ton.

The condition of the Engineering Trades remains much the same as last reported.

In the Coal Trade prices, if anything, are rather steadier, but they continue low, and although there is less underselling, nothing above late quoted rates is being got. At the pit mouth best coal, such as Wigan Arley, averages 9*s.* to 9*s.* 6*d.*; good seconds Arley and Pemberton Four-feet, 7*s.* 6*d.* to 8*s.*; common house-fire coal, 6*s.* 6*d.*; steam and forge coal, 6*s.*; burgy, 4*s.* 6*d.* to 5*s.*; best slack, 4*s.* to 4*s.* 3*d.*; and common sorts, about 3*s* to 3*s.* 3*d.* per ton.

Shipping has been fairly good, and this has kept some of the collieries tolerably busy on common coal, but prices have continued low, good qualities delivered at the High Level, Liverpool, or the Garston Docks, not averaging more than 7*s.* 3*d.* to 7*s.* 6*d.* per ton.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Jan. 15.—It is pleasant to see that another attempt is to be made to extract gold from the lodes of Merionethshire, and my best wishes go with the veteran, Mr. Readwin, for his success. How dead the spirit of enterprise is in connection with the Principality may be judged from the fact that there are at least a dozen decent slate quarries at this moment waiting purchasers, and some of them as good as need be. The verdict of the coroner's jury respecting the loss of life at the Dorothea Slate Quarry is "Accidental death." Work keeps good at the principal quarries, the bulk of the production being sent northwards.

At the Liverpool Geological Society Mr. G. H. Morton has just read an interesting paper on the limestone of North Flintshire, in which he referred to traces of Roman mining at Melsden, and Mr. Mellard Reade one on the geological features of the Mersey tunnel. For my part I should like a keener search to be made by geologists and antiquaries for traces of ancient British mining. I am strongly of opinion that a great deal which is now credited to the Romans really belongs to the Britons. We certainly have plenty of evidence that the conquerors were not so much discoverers as appropriators, and we also know that much of the mining done in Britain during the period of the Roman occupation was done more by the natives than by the Roman soldiers.

The deposit money of the Manchester Ship Canal Bill, 299,000*l.* odd, has been paid into the bank. The bill itself is not to escape opposition, but we must all really now wish it to become law. The Manchester people are also resuscitating their great scheme for obtaining a fresh supply of water from Thirlmere, for which they obtained powers about five years ago. This will be a fitting comparison to the great water scheme at Liverpool now in course of progress.

The Salt Trade of Cheshire keeps in a healthy condition, and the production maintains its average. In the pottery districts there are some signs of improvement, and that the glut there seems to have been in the American market is passing away. A collision between two of the steamers belonging to the London and North-Western Railway Company took place yesterday in Holyhead Harbour, which might have been attended with more serious results. The collieries are all fairly at work, and the severity of the weather has quickened the home demand for coal. Although there is no change for the better in prices, the ironworks also keep well employed. The fire-brick, tile, pipe, and sanitary ware trades are busy, which seem to indicate a corresponding activity in the building trades. The engineering shops also and the several miscellaneous trades of the district are all tolerably well employed.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Jan. 15.—No revival appears in the demand for mill and forge and furnace coal. The consumption so far this month has been very tame, and buyers press owners for concessions in prices. Coalmasters on 'Change this week mentioned instances in which they had recently lost old customers because of their refusal to further give way in quotations. Selling rates of forge coal vary according to the locality where mined, from 5*s.* up to 6*s.* per ton at the pits, mill coal from 6*s.* 6*d.* to 8*s.*, and furnace coal from 8*s.* to 10*s.* The Cannock Chase Collieries have experienced a slight fillip because of the winter weather, but the pits there are not making above four or four and a half days a week. Northampton ironstone is quoted at an average of 6*s.* per ton delivered, and Welsh forge cokes about 14*s.* per ton. Sales of foreign pig-iron are taking place pretty briskly on the basis of 41*s.* to 41*s.* 6*d.* for Northampton pigs, and 42*s.* to 42*s.* 6*d.* for Derbyshires. Native pigs are depressed as to all but part-mines and also cinder qualities. The manufactured iron branch shows no change upon the Quarterly Meetings, and prices are unsatisfactory.

At an extraordinary meeting, on Monday, in Wolverhampton, of the shareholders of the Chillington Iron Company (Limited) of that town, it was shown that, in addition to former heavy losses year by year for several years past, the last nine months' trading had resulted in a further unfavourable balance of 11,000*l.* As the directors did not see that it was probable that trade would early revive in a conspicuous degree they determined to recommend voluntary liquidation. The secured debts were estimated at 50,000*l.*, and the unsecured at 10,000*l.*; and a mortgage and a bill of sale is held upon the whole of the property by Mr. Alfred Hickman, blast-furnace proprietor, for a loan of somewhat over 30,000*l.* This money Mr. Hickman advanced at 7 per cent. when, about a year ago, the bank, who were the mortgagees, were pressing for payment; and he would have advanced more money now if the directors had determined to keep going. The recommendation of the directors was carried upon a division, and a committee of enquiry was appointed at the same

time. To-day heavy bills of exchange given by the company mature. The liquidator will be selected at the meeting to be held to confirm Monday's meeting. There is fair probability of the works restarting when trade revives.

The annual meeting of the North Staffordshire Mining Institute will be held next month. Meantime the officers to be then nominated were accepted at a meeting of the Institute on Monday. At that meeting also a resolution was adopted, affirming the desirableness of establishing a telephone exchange for the district, and a satisfactory communication was read from the Home Secretary, in which the Mining Association of Great Britain was informed, with regard to the precautions relating to stores and magazines of explosives, that no general rule was to be laid down, but that each case was to be taken on its merits as to the security required.

TRADE IN SOUTH WALES.

Jan. 15.—The amount of coal shipped in the month of December at Cardiff was 443,709 tons foreign and 77,684 coastwise; Newport, 141,611 tons foreign and 86,016 coastwise; Swansea, 67,475 tons foreign and 45,754 coastwise. The shipments for the whole of 1884 were:—Cardiff, 6,967,013 tons foreign and 980,432 coastwise; Newport, 1,721,512 tons foreign and 1,081,540 coastwise; Swansea, 946,526 tons foreign and 701,517 coastwise. These returns show an increase over 1883 of 204,342 at Cardiff, 140,059 at Newport, but a decrease of 42,291 tons at Swansea. Of patent fuel Cardiff exported 176,065 tons in 1884, and Swansea 313,186 tons. Last week Cardiff sent away 129,226 tons foreign and about 20,000 coastwise, with 3035 tons patent fuel, showing that trade is again taking an upward bound; Newport, 27,295 tons foreign and 22,469 coastwise; Swansea, 24,441 tons foreign and about 14,000 coastwise, with 7025 tons patent fuel. Of coal sent by railway to London in 1884 the Great Northern carried 26,000 tons from Aberdare, and the London and North-Western 56,000 from the same district; as well as 13,600 from Fforchaman, 10,600 from Resolven, and 17,600 from Bwllfa. The Great Western took 50,000 tons from Aberdare, 46,000 from Nixon's Navigation, 44,000 from Fforchaman, and 35,000 from Bwllfa. Large quantities were also sent by various lines from other pits, showing that the coal trade between South Wales and London is an increasing one, which will receive another impetus when the Severn Tunnel is open, an event near at hand.

The iron exported from Cardiff in 1884 amounted to 83,199 tons; Newport, 103,572; Swansea, 4979. In the month of December the amounts were:—Cardiff, 6116 tons; Newport, 5707; Swansea, 680. Last week Cardiff sent away 740 tons, and Newport 2160. Iron ore arrived at Cardiff to the extent of 7601 tons from Bilbao, and 3888 tons from other places; Newport received 6901 tons from Bilbao, and 6580 from other places.

Swansea is becoming the chief port for the export of tin-plates, instead of Liverpool, no less than 107,000 tons having been sent away from the southern port in 1884. As the plates are made chiefly in the neighbourhood of Swansea it is a wonder that this change has not been effected before. The next Quarterly Meeting will also be held at Swansea, instead of Birmingham—another change for the better. It is stated that not one penny of profit was made in 1884 on tin-plates in consequence of the lowness of prices. The present quotation of 14s. for common cokes leaves no profit, but at 13s. there is a decided loss. The only sensible step that can be taken is a reduction of make, which will probably be taken as a final remedy.

ATLANTIC PACIFIC RAILWAY TUNNEL.

One of the chief obstacles in the way of the railway engineer, and one which greatly adds to the first cost of a railroad, is the interposition of lofty mountain ranges. Such a range intercepts the two great railroads which afford communication between Denver and Utah. The mountains are accessible and practicable for direct railroad construction up to a point on the Great Divide 4441 ft. below the summit of Gray's Peak. A tunnel through this short section, less 5 miles in length, would enable a direct road to be laid out between Denver and Salt Lake, and save the detour of some 300 miles, made the one to the north and the other to the south of this district, by the present railroads. This would not be the only advantage to be gained by the tunnel. It is stated that Gray's Peak and the Divide are at this point literally seamed with silver ore deposits, and though some of the best paying mines in the country are to be found here they have not as yet succeeded in exhausting, or even reaching, the lower termination of one of the 200 fissure veins of silver ore already located and in course of working on the surface. From a pamphlet consisting of copies of documents relating to this Atlantic-Pacific Tunnel, with some remarks upon the present condition and future prospects of the State of Colorado, by Mr. Archibald J. Dunn, we learn that within a distance of 2000 ft. from the breast of the tunnel at the west end it will cut more than 20 veins that crop out along the side of Ruby Mountain, and that within a distance of 1500 ft. from the breast of the east end of the tunnel, a less distance than has already been driven, 35 large high-grade ore veins will be cut, at depths ranging from 1500 to 2600 ft. below the outcrop, and the ore from these veins yields from 100 to 8000 ozs. of silver per ton of ore.

By this tunnel method the veins are cut into at great depths—from 1000 to 4500 ft. below their outcrop along the sides and the tops of the mountains. By this tunnel all the portions of the mountain range above the level of the tunnel, whose seams are cut, will be drained, and the water will run out of the tunnel in channels cut therein. The grade of the tunnel is 1 in. to 32 ft., rising towards the centre to insure a steady outward flow of the water that so troubles miners where it has to be pumped or lifted, at great expense, day and night, to prevent its accumulating in the mines. This expense is about 40 per cent. of the cost of working wet mines. By the tunnel all these 200 veins will be drained, so that the water will get out at no other cost than getting to it, and it can be used to drive machinery at each end of the tunnel.

As a financial enterprise Mr. Dunn considers that the work undertaken by the Atlantic-Pacific Railway Tunnel Company cannot fail to be crowned with brilliant success. Possessing a soil of unexampled fertility, and mountains abounding with rich mines of silver, lead, gold, copper, coal, and iron, with so fine a climate that invalids flock from all parts to it, it is evident that Colorado is destined, at no distant date, to become one of the richest countries in the world, and to play an important part in it. The railway traffic alone, which, by the nature of things, must be carried through the tunnel, would enable the company to pay handsome dividends; but apart from this, the great amount of mineral wealth which must invariably be tapped by the construction of the tunnel, will earn for its shareholders enormous profits unequalled in the history of mining. The testimony of Prof. Cummings Cherry, sen., is that the Atlantic-Pacific Tunnel is unquestionably the grandest mining enterprise in Colorado, and warrants all the capital necessary for its construction. In addition to the remarks of Mr. Dunn, the pamphlet contains the opinions and reports of several gentlemen, which all bear testimony to the wealth of the ground through which the tunnel will pass, and speak of the success of the undertaking as being sure.

FLUE CLEANER FOR STEAM BOILERS.—A cleaner consisting essentially of a long air pipe, surrounded at one end by a steam pipe, which is so much larger in diameter that a narrow annular space is left between the two pipes, has been patented by Mr. J. HAUGHAN, of Niagara Falls. The steam pipe projects a short distance beyond the air pipe, and is at its end provided with an open conical nozzle, which is placed against the flue to be cleaned, and the steam turned on. The current of steam causes a suction in the air pipe, and the air commingling with the steam within the nozzle will serve to clean the flue, using, it is claimed, less steam than is ordinarily required.

ACCIDENTS IN MINES COMMISSION.—Meetings of this Commission were held on Tuesday and Wednesday at its offices, Victoria-street, Westminster. There were present the Chairman, Mr. Warington W. Smyth, F.R.S.; Sir Frederick Abel, C.B., F.R.S.; Professor Clifton, F.R.S.; Mr. W. Thomas Lewis; and the secretary, Mr. Arthur J. Williams.

INSTITUTION OF CIVIL ENGINEERS.

A meeting of members and associates was held at Great George-street, Westminster, on Tuesday, when Sir F. BRAMWELL, occupying the chair for the first time since his election as President, said that he thought it would be fitting and appropriate that, in his capacity of their President, and Chairman of the Council of the forthcoming Exhibition of Inventions, he should direct attention to some matters which would or ought to be contributed to that Exhibition. He asked their attention while he considered certain of the apparatus, appliances, processes, and products brought into use since 1862. In those matters which may be said to involve the principles of engineering construction there was of necessity but little to note in the way of progress, because principles were very soon determined, and any advance made was not by addition to those principles, but by giving to them practical shape. Having spoken of the combination of principles in girder construction, which is represented by the suspended cantilever of the Forth Bridge now in course of construction, the author went on to say that the employment of testing machines had come into the daily practice of engineers. In lieu of such machines being used, by the few, and at rare intervals upon small specimens, for experimental purposes, they were now employed in daily practice and on a large scale. A noteworthy instance of the use of pneumatic appliances, in cylinder sinking for foundations, is that in progress at the Forth Bridge. The wrought-iron cylinders are 70 ft. in diameter at the cutting edge, and have a taper of about 1 in 46. At their bottoms there is a roofed chamber, into which the air is pumped, and in which the men work when excavating, this roof being supported by ample main and cross lattice girders. At the Tay Bridge, also now in course of construction, the cylinders are sunk, while being guided through wrought-iron pontoons, which are floated to their berths and are then secured at the desired spot by the protrusion, hydraulically, of four legs, which bear upon the bottom, and thus, until they are withdrawn, convert the pontoon from a floating into a fixed structure.

The ingenious diving apparatus of Mr. Fleuss, by which a man may remain below water for a considerable period, altogether independent of pipes or cords, was also described, and after speaking of the latest methods of sub-aqueous tunneling, he went on to say that in ordinary land tunneling since 1862 there had been great progress by the substitution of dynamite, and preparations of a similar nature, for gunpowder, and by the improvements in the rock-drills worked by compressed air, which are used in making the holes into which the explosive is charged. For boring for water and for many other purposes the Diamond drill has proved of great service, and most certainly its advent should be welcomed by the geologist, as it has enabled specimens of the stratum passed through to be taken in the natural unbroken condition, exhibiting not only the material and structure of the rock, but the direction and the angle of the dip of the beds. Coal-getting machines, such as those of the late Mr. Firth, worked by compressed air, reduced to a minimum the waste of coal, relieve the workman of a most fatiguing labour in a constrained position, and save him from the danger to which he is exposed in the hand operation. It was a matter of deep regret on many grounds, but especially as showing how little the true principles of political economy are realised by working men, who are usually well informed on many other points, that the commercial failure of these machines was due to their opposition.

Hydraulic wedges and lime cartridges were also introduced for use in coal mines as a substitute for gunpowder. Speaking of canals, he said the great feature of late years in canal engineering is the provision of canals for saving circuitous journeys in passing from one sea to another, or for taking ocean steamers many miles inland. But the old fight between the canal engineer and the railway engineer, or, more properly speaking, between the engineer when he has his canal "stop" on and the same individual when he has his railway "stop" on was revived, even in the case of the transporting of ocean vessels from sea to sea, for Mr. Eads is proposing to connect the Atlantic and the Pacific Oceans by means of a ship-railway across the Isthmus of Panama. He suggests that the largest vessels should be raised out of the water in the manner commonly employed in floating docks, and should then be transferred to a truck-like cradle on wheels, fitted with hydraulic bearing-blocks (this being, however, not a new proposition as applied to graving docks), so as to obtain practical equality of support for the ship, notwithstanding slight irregularities in the roadway; while he proposes to deal with the question of changes of direction by the avoidance of curves and by the substitution of angles, having at the point of junction of the two sides turntables on which the cradle and ship will be drawn. These can be moved with perfect ease, notwithstanding the heavy load, because the turntables will be floating in water carried in circular tanks. The question of preserving the level of the turntables, whether unloaded, partially loaded, or loaded, is happily met by an arrangement of water ballast and of pumping. Mr. Eads has so dealt with the mouth of the Mississippi as to cause that river to scour and maintain a channel 30 feet deep at low water, instead of that at 8 feet deep which prevailed there before his skilful treatment. By the process of Messrs. Thomas and Gilchrist it had been rendered possible to employ successfully, in the production of steel, iron derived from ores which prior to the date of this invention had been found wholly inapplicable for the purpose. In the manufacture of pig-iron many improvements had been made. In steam-boilers and steam-engines it was difficult to point to any great substantive novelty, but these machines had been more and more scientifically investigated, and the results of such investigation had been practically applied, and had been attended with the anticipated advantages.

Having spoken of gas-engines and their improvements, he said he could not not believe that steam would continue to be the vehicle for transmitting heat into work. A motor has been recently tried where no fuel is employed directly, but where a boiler, being filled with water and steam under pressure, has its heat maintained by exposing caustic soda, contained in a vessel surrounding the boiler, to the action of the waste steam from the engine, the result being that as the moisture combines with the caustic soda, a sufficient heat is developed to generate steam and keep the engine working for some time. The trials have been made with the motor for propelling a launch, and he believed with one for working a tramcar. It may be we have here a source of power in a portable form useful for many purposes. It hardly needs to be said fuel has eventually to be employed to drive off the moisture from the soda, and thus to bring it back to its caustic condition.

The great development of the mineral oil industries had led (and especially in Russia in whose territory such enormous yields of oil are afforded) to the employment of this material as a fuel in furnaces and in steamboilers. There were lines of steamers on the Caspian worked entirely by liquid fuel, and the same kind of fuel was used to fire the locomotives in many districts. As to the regenerative gas furnace, Mr. Frederick Siemens, by a course of study had recently discovered that so far from the heating power of the flame being increased by its confinement within narrow chambers, and by its being brought into contact with the material to be operated upon, such arrangements only diminish that power, and he had further found that this discovery can be usefully applied in practice, by keeping the roof of a regenerative gas furnace at such height above the hearth, on which the materials to be heated lie, that the flame can traverse from one side of the furnace to the other, free of contact with the roof above, or with the materials below. Very excellent economic effects, and a high heat, it is stated, have been obtained by causing the outgoing products of combustion to give up their heat to the incoming cold fuel. He had seen such furnaces in operation, making steel by the hearth process, and it was the fact that the chimney has been without a trace of red glow within it. The natural oils which are used as fuel are rarely employed in their crude state, as obtained from the wells; but they all undergo more or less refining before use. There is another natural fuel, however, which has been discovered in America, and within the last few years largely utilised—this is the gas obtained from wells in a manner similar to that in which the oil is obtained. It was a marsh gas of high calorific power, and was in certain parts of the United States being used very largely for domestic heating, for the heating of furnaces of every description, including those for the manufacture of plate-glass and of steel; it was also being employed for the manufacture of lamp or carbon black, and for the carbon points for electric lighting. It was stated that within a radius of 20 miles from the town of Pittsburg, taken as a centre, there were 25 wells, each producing 3,000,000 cubic feet per 24 hours, and that the produce of the whole of the wells at present opened up is 100,000,000 cubic feet of gas per day. To his mind this was one of the most perfect fuels which could be imagined; it required no preparation, but could be used in the same state as that in which it issues, under a high pressure, from the wells; it can be mechanically controlled with the greatest nicety, and when properly burnt is entirely free from smoke or similar defects. When employed in the Siemens regenerative furnace, the producer, which is necessary where coal is used, is entirely dispensed with.

After referring to the improvements that have taken place in agricultural implements, he concluded his address by stating that he would do everything in his power to uphold the dignity, honour, usefulness, and prestige of the institution, and invited their co-operation. A vote of thanks was proposed by Sir C. H. GREGORY and seconded by Mr. HAWKSLEY, and having been carried and responded to the meeting terminated.

BIRMINGHAM AND MIDLAND INSTITUTE.

The annual meeting of the members of the Institute was held in Birmingham, on Monday, when the Rev. A. R. VARDY occupied the chair. In moving the adoption of the report, the Chairman referred to the cloud they were under at the last meeting, owing to the death of their hon. secretary, and stated that cloud still hung upon them. During the year the council had met with some disappointments, the first being the small progress that had been made with the building extension fund. There was no fault to be found with those to whom that matter had been entrusted, but this non-success was due, he thought, to the depressed state of trade. The failure to come to terms with the School Board for the occupation of the rooms of the Institute during the day was another disappointment. The failure to bring the negociations to a satisfactory result was a matter for regret on the part of the Institute, but, perhaps, not on the part of the town, because it was due to the great liberality of the Chairman of the School Board, who provided at his own expense another building specially equipped for the purpose, in which the classes it was proposed to hold at the Institute were being held. There was a small decrease in the number of members of the industrial department; but whilst that was a fact, it was also true that the quality of the work done at the Institute had materially improved.

The council regretted the retirement of Mr. Edwin Smith, but they hoped it was only temporarily, and that with improved health he would soon be able to take his place amongst them again. Although they had had causes for regret, they had also had many causes for congratulation. There had been a distinct increase in the number of members of the general department. The town, in spite of the depression of trade and the badness of the times, was beginning to understand better than it did how great were the advantages which the Institute offered in that direction, and the council confidently anticipated that that increase in the membership of the general department would be more than sustained during the coming year. With that increase there was a distinct improvement in their balance-sheet. For the first time for many years there was a balance on the right side. It was true they still laboured under the weight of the accumulated deficiency of former years, but they were pleased to find that they had at length on the year's operations a balance on the right side. The Birmingham Chess Club now held its meetings in their rooms, and an observatory had been formed in connection with the Institute. The anemometer had been erected at the top of the monument in Ladywood-road. The fund in memory of their late honorary secretary had been now closed, and the whole amounted to nearly 3000*l*. They had hoped before long to have in the entrance hall, in memory of Mr. John Henry Chamberlain, a tablet which had been so kindly designed for them by Mr. William Morris. As a result of the meeting of the Social Science Congress, in Birmingham, they received a donation of upwards of 100*l*. to the Institute funds. The classes in the industrial department had met with continued success during the year, and the health lectures had also been very successful. In the rearrangement of the salaries of the teachers, some of whom had suffered a considerable reduction, the council had received the sympathy of everyone, and as an instance of their loyalty to the Institute he might mention that one gentleman expressed his willingness to conduct his classes for nothing if thereby he might serve the Institute itself. They also owed a debt of gratitude to Councillor Martineau for undertaking the duties of hon. sec. at a period when numerous and pressing engagements occupied his time. A far greater question which had come before them was the condition of the finances of the Institute. The step taken by the council in asking the Town Council to assist them by means of a voluntary rate was considered a bold one, but it was not taken without great consideration, and without such encouragement as led them to feel that they would be justified in making the proposition they did. They were glad to know that in many quarters the Institute was recognised as a possession of the town, a possession of which the town was proud, and which it desired to keep in good and effective working order. It was in the belief that that feeling towards the Institute widely prevailed that they had asked the Town Council to consider the possibility of their obtaining a voluntary rate in aid of the funds. He spoke of the rapid growth of the music classes, and in conclusion said that with the encouragement the council continued to receive from many quarters, with the faith they unflinchingly held in the public spirit of the town, and above all with the firm assurance of the permanent value of the work that was being done in the Institute, they should not hesitate to go forward in the path in which they were called. The adoption of the report was seconded by Mr. H. C. D. FRANCE, and carried unanimously.

After referring at some considerable length to the accounts, Mr. G. S. MATTHEWS proposed as President of the Institute for the ensuing year, the Archbishop of Canterbury. The Archbishop was a Birmingham man; he was educated at King Edward's School, he was one of the best scholars there, and at Cambridge he was the senior Vice-Chancellor's medallist. He was a master at Rugby, headmaster at Wellington College, was appointed by Lord Beaconsfield Bishop of Truro, and by Mr. Gladstone Archbishop of Canterbury. When they considered that the two great political parties in the country had thought that gentleman worthy of being promoted to a bishopric and an archbishopric, he (the speaker) thought it was saying something for his general worth, and he was quite sure they would accept the nomination with acclamation. Unfortunately they had not been able to secure his Grace's acceptance, as he had not replied at present to the invitation of the council, but considering the great interest he took in Birmingham they had every hope he would accept the position.

The resolution having been seconded by Councillor HOPKINS, was carried unanimously. Other officers for the ensuing year having been elected the proceedings terminated.

EXTRACTION OF GOLD FROM IRISH ORES.—Attention having recently been drawn to a process for the extraction of gold from ores lately perfected by Mr. B. C. MOLLOY, M.P., it may interest some to learn that, in 1796, gold was discovered in the neighbourhood of Ballina valley, in county Wicklow, and to such an extent that it was named, and is still called, "the gold mine." After the discovery the peasantry and others washed the drift for a space of about six weeks, and washed out from the sand about 800 ozs. of gold, valued at over 3000*l*. The Government of the day took possession of the property, and set up works, which were soon destroyed by rebels. Work was subsequently resumed, but abandoned. The total amount of gold extracted under the supervision of the Government officials exceeded only slightly that obtained by the private enterprise of the original workers, the Government return being 3700*l*. In 1854 private enterprise again entered the field and made some careful trials from gossan selected from the shallows of Ballymurtagh, which gave a result of from ¾ to 1 oz. of gold to the ton of ore. Authorities have stated the conformation of the Wicklow fields to be very similar to some of those of New Zealand.

STANDARD METHOD OF STEAM-BOILER TRIALS.

The determination of the steaming capacity and economy of boilers is definitely recognised by all engineers engaged in their construction, and it has been felt that some system of testing should be settled upon for general use which would give all the needed facts with substantial accuracy. The following abstract of the report of the committee on this subject, read before the American Society of Engineers, may be of interest. First of all it should be said that maximum steaming capacity and maximum economy of fuel are almost invariably, if not always, the result of incompatible conditions; and, therefore, the object of the test to be made should be precisely stated and carefully kept in view during the whole trial and during the preparation of the report.

The boiler to be tested should be exactly measured and put in the best possible order, and an understanding should be reached before the trial in regard to the kind of fuel used. The establishment of the correctness of all the apparatus to be employed in the test is the first of the preliminaries to their use. The standardisation of the instruments is a matter of supreme importance, since upon their accuracy the whole work of the engineer is dependent. The method of keeping the record of the test is also of great importance. Where practicable analyses of escaping gases should be made. The establishment of the value of the unit of evaporation, and that of the commercial horse-power of the boiler, are matters of essential importance to the settlement of a thoroughly complete standard method of trial, and of a perfectly satisfactory system of reporting results.

It has gradually come to be the custom to reduce all results to the common standard of weight of water evaporated by the unit weight of fuel, the evaporation being considered to have taken place at mean atmospheric pressure, and at the temperature due that pressure, the feed-water being also assumed to have been supplied at that temperature. This is in technical language said to be the "equivalent evaporation from and at the boiling point" (212° Fahr.). With regard to the character and magnitude of the unit to be chosen to express the "power" of the steam-boiler, the committee state that what is needed is a standard unit of boiler power which may be used commercially in rating boilers, and in specifications prescribing the power to be demanded by the purchaser and guaranteed by the vendor. By general consent it seems likely that the unit which will meet with final acceptance for general purposes in the estimation of boiler-power is not far from 30 lbs. of dry steam per horse power per hour. The unit of power proposed is equivalent to the development 33·306 heat units per hour, or 34·488 units of evaporation. The arguments in favour of the retention of this unit of power without modification are:—1. It is to a certain extent established, being the only unit proposed by authority up to the present time which has been accepted to any important extent by practitioners.—2. It is considered by its proposers, and probably by engineers generally to fairly represent good average practice in the application of steam-power as exhibited in the operation of engines and boilers under ordinary actual working conditions.

Another standard unit which had been proposed and strongly urged as preferable to the above is that represented by the evaporation of 30 lbs. of feed-water into dry steam from and at the boiling point, at mean atmospheric pressure (212° Fahr.). The arguments in favour of this unit are the following:—1. In the determination of the unit of evaporation to be used in steam-boiler practice it has been generally, and probably unanimously, decided by engineers that the evaporation shall be reckoned as having been effected at the boiling point from water assumed also to be supplied at that temperature, and that 1 lb. thus evaporated shall be the unit. This being the established unit of evaporation, consistency and convenience both dictate that the power of the boiler should be expressed in the same unit or some handy multiple thereof.—2. It is submitted that the reduction of this unit to an exact multiple of the unit of evaporation will greatly facilitate calculations, inasmuch as the work done by the boiler is to be reduced to the same standard of feed temperature and temperature of evaporation.—3. By the adoption of this unit the trouble and risk of error coming from the attempt to use a factor as proposed above, differing from the multiple of the already accepted factor by 14·96 per cent., may be entirely avoided.—4. The unit last proposed is equivalent to 26·09 lbs. of water evaporated from 100° Fahr. into steam at 70 lbs. pressure, and is claimed to be itself more nearly representative of good average practice than the Centennial unit. After full debate and earnest thought it has been determined to accept the arguments in favour of the first of the two proposed units, but to endeavour to also meet these last stated, and to recommend that in all standard trials the commercial horse-power of a steam-boiler be taken as equivalent to an evaporation of 34½ lbs. of water from a feed-water temperature of 212° Fahr. into steam at the same temperature, which is considered to be equal to an evaporation of 30 lbs. of water from a feed water temperature of 100° Fahr. into steam of 70 lbs. gauge pressure.

MINERAL WEALTH OF MINNESOTA.

The State of Minnesota, occupying the elevated plateau of North America, has an area of 84,286 square miles, or 53,943,379 acres, of which 3,608,012 acres are covered by inland lakes and rivers. Vice-Consul Treherne, in his report on the trade and commerce of the district, says that about the only considerable portion of the State known to be positively uncultivable, is a strip of land comprising apparently about one-third of Cook, one-fourth of Lake, and one-twentieth of St. Louis counties. This extends entirely across the northern portion of the two first-named counties, and a short distance west of Lake Vermillion. In the latter it is known as the "Iron Range," and is said to be the richest and most extensive deposit of that valuable metal found on this continent, if not in the world. The length of the range, as far as discoveries have been made, is upwards of 75 miles, and its width varies from 20 to 40 miles. Ore has been found in nearly every part of this track, sometimes cropping out among the rocks, and again lying but a few feet below the surface. The ore is a hard, hematite, specular variety, and the results of upwards of 30 specimens taken from different parts of the range show from 65 to 72 per cent. of metallic iron. Experts pronounce the quality of the metal fully equal to the best Swedish iron, and peculiarly well qualified for the manufacture of Bessemer steel and "chill" iron. Mines are now being opened on the range, and two railways are projected—one being in course of construction from the north shore of Lake Superior. Copper and silver ores are also found in Lake and Cook counties, and mining for both these metals has already been commenced there with, it is alleged, the most flattering promises of success.

Plumbago of good quality is likewise claimed to have been discovered on Pigeon Point, in quantities sufficient to justify mining, and rumours are circulated from time to time of the finding of other metals and minerals in these localities. The entire north shore of Lake Superior is asserted to be a mineral region of uncommon richness, and its proximity to the lake gives it especial value, because of the facilities for inexpensive transportation thus afforded. Another mineral region is that in the vicinity of the lake of the woods. A beginning has been made on the eastern side of this lake north of the international boundary in gold mining, and gold has undoubtedly been obtained there in considerable quantities. Gold has also been found in combination with other metallic and mineral substances near Vermillion Lake, and at several other points along the boundary, and silver ore of high grade is said to be abundant in the vicinity of Hunter's Island. The entire region along the northern boundary may prove to be valuable by reason of its minerals, but that part of it east of Lake Vermillion, and north of the latitude of its south shore, is pronounced utterly barren, the surface consisting almost wholly of exposed rocks, with scarcely any covering of soil. Its only vegetable products are moss, and an occasional scrub pine of stunted growth.

The mineral deposits of Minnesota have as yet been but slightly developed. Iron mining in the northern part of the State has certainly been the principal effort in that direction. There has been an extensive development of the Vermillion Lake iron district of Minnesota. The iron ore syndicate, known as the Minnesota Iron Company is composed of Ohio, Pennsylvania, and Minnesota men. The property of the company lies in St. Louis county, Minn. Two mines have already been opened, and the results show that the ore is equal, if not superior, to any mined in the Lake Superior district. The new company owns 22,488 acres in all. The shipping port on Lake Superior for the ores of the district will be Two Harbours, 25 miles north of Duluth. The surveyed line of the Duluth and Iron Range Railroad, the interests of which are substantially identical with that of the Minnesota Company, between the town of Tower, at Vermillion Lake, and Two Harbours, is 72 miles in length. This line will be at once extended to Duluth, and there placed in connection with the railroad system of the United States. The entire length of the road, when completed, will be nearly 100 miles. Work on the road is now in active progress, about 1000 men being employed. It will be built in the most thorough manner, of standard gauge. The Duluth and Iron Range Railroad Company has also begun building ore piers at Two Harbours. These piers are to be 5 ft. higher than those at Escanaba, and 7 ft. higher than those at Marquette, thus affording the best possible facilities for loading the largest vessels in the trade.

The mineral deposits of the Territory of Dakota have been, and are being, very extensively developed. The wealth of the Black Hills is simply marvellous, consisting of gold, silver, mica, salt, and coal mines. Rich and profitable gold mines are now being successfully worked in the Black Hills. Coal is also mined along the line of the Northern Pacific Railroad to a considerable extent.

MINERAL PRODUCTS OF CHILI.

The minerals exported from Antofagasta are stated in the report of Vice-Consul Barnett. The total export of nitrate of soda for the year 1883 was 1,208,778·39 Spanish quintals, equal to 54,745 English tons, of which 35,677 English tons were carried in British bottoms. The total export in 1882 was 1,206,102·26 Spanish quintals, equal to 54,624 English tons, and 36,349 tons were carried in British bottoms, thus showing for 1883 an increase of 2676·13 Spanish quintals, or 121 English tons exported, and a decrease of 672 tons carried in British bottoms. The steady increase in exports of nitrate to Germany noted in the report for 1882 continued during 1883, the figures being—exports, 1881, 157,661·19 quintals; for 1882, 208,776·43 quintals; and for 1883, 462,451·29 quintals. In shipments to France direct there is also an increase of 46,036·72 quintals in 1883 over 1882. To the States shipments of nitrate show a falling off, and to England it is notable that not a single cargo has gone direct. Since the commencement of production at Antofagasta to the end of 1883, 9,037,908·12 quintals, equal to 409,326 English tons have been exported. The total exports of iodine were 41,666 lbs., equal to 19 English tons, showing a decrease in export for 1883 over 1882 of 76,341 lbs., or 34·57 English tons. Total export of iodide of copper for 1883 was 117,330 lbs., equal to 53·14 English tons, not previously manufactured here.

The decrease in shipments of iodine has been compensated for, in a measure, by its export under the form of iodide of copper. The total exports of silver for 1883 were—In bar, 218,198½ marks, of the declared value of $2,052,086½; and in other forms, 6199½ marks, worth about $40,000 = 224,397 marks, worth $2,092,086½. The mark here referred to is 8 ozs. Spanish weight, or 7·396 ozs. troy. Silver, contrary to expectations, shows a falling off in export to a considerable amount. The improved appearance of the mines at the latter end of 1882 was not long maintained in 1883. The precious metal came in "pockets," which did not last, and left the veins perhaps poorer than before. The probable early extension of the line of railway further to the interior, it is hoped and expected, will enable the working with greater energy of many poor mines and the opening of new ones. The interior of this desert is almost unknown, and as it becomes opened out and explored its immenss riches will gradually be brought to light.

The production of copper has been in 1883, in ore, 132,811 Spanish quintals, equal to 27,112 Spanish quintals of fine copper, or (say) 6015 English tons of ore, giving 1228 tons of fine copper. In 1882 the production was, in ore, 93,245 Spanish quintals (4238 English tons), giving 21,037 quintals (956 tons); and in 1881 the production was, in ore, 15,297 quintals (695 tons), giving 3,800 quintals (173 tons); thus showing an increase of production in 1883 over 1882 of 39,566 quintals (1792 tons), equal to 6075 quintals (275 tons) of fine copper; over 1881 of 117,514 quintals (5322 tons), equal to 32,312 quintals (1055 tons) of fine copper. The production of copper ore is steadily increasing in this neighbourhood, though the ley of the ore averages perhaps a little less than formerly. The total export of borate of lime for 1883 was 32,923·08 Spanish quintals. The year 1883 was the first of the export of this product from this port.

WEST SETON.—At the meeting, on Thursday (Mr. Thos. Pryor in the chair), the accounts showed a loss on the four months' working of 1080*l.*, increasing the debit balance to 5399*l.* A call of 10s. per share was made. Captain Rutter, supplementing the report, said they were led to believe that they had got to the bottom of the lode of the kind they had from the 190. It was now harder, and they had until lately met with oxide of iron. What this would lead to he did not know. Whether they were nearing the elvan course, whether it indicated gossan overlying something much better, or whether they were nearing the granite he could not say. He did not think it hopeless to expect granite to be found in West Seton. Were they to find it the value of that mine would be very greatly enhanced in the course of a week. He did not think they would sell one mine for less than 100,000*l.* Mr. J. Mayne called attention to the increase in the price of dynamite, and asked if a fresh contract had been entered into. Captain Rutter said they had not entered into a contract, and they were now using an increased quantity of powder. They found it better in some places where the lode was of great width or was hard. The powder rendered farther—extended farther. Dynamite was an excellent thing in wet places. The high price of dynamite had driven them to the increased use of powder.

BRITISH ASSOCIATION IN CANADA.—In a paper on this subject, read before the Royal Colonial Institute on Tuesday evening, General Sir J. H. LEFROY, K.C.M.G., F.R.S., described the warm welcome which the members of the Association, 747 in number, received in Canada. The introductory addresses, he said, especially those of Lord Rayleigh, the President, of Dr. R. S. Ball, and of the Rev. D. W. Dallinger, were amongst the most brilliant and original that he had ever heard. He also spoke of the meeting of the Association at which Lieut. Greeley had been present, and he dwelt upon the services done to science by the lieutenant. The main part of the speaker's address was devoted to the consideration of Canada as a field for emigrants from this country. He remarked that immigration was of vital importance to Canada. It was admitted in 1881 that the success of the Canadian Pacific Railway would require about 1,000,000 souls to be introduced into the North-West in the course of the succeeding 10 years, and gigantic efforts had been made to bring this result about. Having quoted various independent authorities as to the prospects of emigrants in the Dominion, and the classes likely to succeed, Gen. Lefroy alluded to various kinds of labour-saving machinery of the most advanced description which met members of the Association at every considerable station on their railway journeys, and to the quality, far in advance of the ordinary prize standard at home, of the agricultural products brought together for a provincial show at Winnipeg. In conclusion, he said that if we allowed our present opportunities of colonisation to slip, the future historian of the decline and fall of Britain would not fail to record, to our shame, that it had in its hands the endowment of half a continent, but lacked the vigour to go up and possess the land. The Chairman, the Marquis of Lorne, in proposing a vote of thanks to the speaker for his interesting paper, said that General Sir H. Lefroy had known Canada scientifically for over 40 years. He might almost be called the father of Canadian science. He was glad to hear such a concurrence of testimony as he had heard that evening as to the immense success of the meeting at Montreal. When the question was first mooted they knew that John Bull was a little difficult to persuade and move, and that it would be a tough job to bring him to Canada. However, with a long pull and a strong pull, and a pull altogether, they succeeded. He hoped the visit would be repeated. He hoped that they might not only visit Canada, but also Australia. The motion having been adopted by acclamation, and briefly acknowledged by General Sir H. Lefroy, a cordial vote of thanks to Lord Lorne for presiding terminated the proceedings.

STREET'S INDIAN AND COLONIAL MERCANTILE DIRECTORY.—During the 10 years this directory has been before the public it has acquired so high a reputation that it is unnecessary to do more than mention that the new edition, that for the present year, has just been issuad in order to ensure all merchants and men of business finding a place for it in their counting-houses. But, for the information of those who are not familiar with the volume, it may be stated that in addition to the trade returns, tariffs, populations, &c., the present volume contains full particulars (with rates and times of transit) of the steam and other communications with the various places treated of, whenever anything like a regular mode of conveyance or correspondence exists; and the average time of transit by sailing vessels is also given. The latitude and longitude are given of nearly all the towns; also the distances from this country. The leading merchants and traders of every class likely to be of any use to manufacturers and all engaged in commerce, are fully enumerated, together with the leading professional men—*e.g.* physicians, surgeons, &c. The usual carefully selected list of the principal merchants and traders in London, and the chief towns in the United Kingdom is also given. Concise descriptions of each country and town are furnished, with a view more particularly to show their commercial capabilities and peculiarities. The principal products, and details as to the articles to which the trade returns chiefly consist will also be found; also tables of the local weights and measures. and the value in English money of foreign coins. All the Londen agents to each of the banks are named, so that a merchant is enabled to see to whom to apply, where financial information or assistance is needed in connection with any particular town or city. Wherever possible the principal Government officials and consuls in each town are given. Particulars of the various railways in operation, or in course of construction, are also supplied where practicable. For convenience of reference, this information has been placed under the separate heading of "Railways." The rapid strides in railway construction make it difficult to give the latest developments, but the information is corrected to as recent a date as possible. The number of towns and cities has again been increased. The new places include the important and rapidly increasing town of Kimberley (in the immediate neighbourhood of the South African Diamond Fields; Bathurst, New South Wales; Warrnambool, Victoria; Brandon and Portage-la-Prairie, Manitoba; and a few others of growing importance in other colonies. In other places, which have been previously given, a large addition to the list of merchants, traders, and professional men has been necessitated by the rapid growth of the various districts. Still more towns would have been included, but for the principle by which the proprietors have all along been actuated—never to give any information that is not, as far as all possible care and labour can make it, perfectly reliable. With the next publication still further progress will be made, and other improvements added. Maps are again given of all the principal countries, of which particulars are furnished in the letter-press. These have been specially revised for the work, with the view to show the relative positions of the chief towns, without confusing the maps with a host of names of unimportant villages and stations.

GEOLOGY OF THE MERSEY TUNNEL.—In an interesting paper "On the Mersey Tunnel; its Geological Aspects and Results," read before the Liverpool Geological Society, on Wednesday, Mr. T. MELLARD READE, C.E., F.G.S., showed that the whole of the rock underlying or forming the present river bed belongs to what is called the pebble beds of the bunter, the lower division of the new red sandstone; that the dip is towards the east, and the strike approximately parallel with the river. A fault was met with in the centre of the river, but this was watertight, and gave no trouble. The rock on the Cheshire side was of a harder nature than that on the Liverpool side. Mr. Reade showed that the present outlet was also the preglacial outlet, and that the upper part of the tunnel intersected the ancient bed worn out of the triassic rock before the laying down of the drift, and when the land was relatively higher than now with respect to the sea level. The existence of this buried channel filled in with drift was predicted by him in 1872, in a paper entitled the "Buried Valley of the Mersey," read before the Liverpool Geographical Society. The drift turned out to be hard boulder clay, the most favourable material among the drift beds that could have occurred. The channel where intersected was about 100 yards wide, and nearer to the Liverpool side than the centre of the river. It was explained that this had resulted from the wearing down of the rock laterally towards the eastward, as the river deepened its channel in consequence of the prevailing dip and the superior hardness of the rock on the Cheshire side. Borings and sections were exhibited, showing the nature of the post-glacial deposits in the upper reaches of the Mersey basin, Mr. Reade intimating his intention to deal more fully at a future time with this interesting, but hitherto little worked, department of local geology. A discussion followed the reading of the paper, and an essay, entitled "Further Observations on the Carboniferous Limestone of the North of Flintshire," was next contributed by Mr. George H. Morton, F.G.S. The author exhibited and described a section of the carboniferous limestone along the termination of the high land of the north of Flintshire. The upper beds occur close to Prestatyn, the middle beds at Milliden, and the lower beds at Moel Hiraddug. The thickness of the whole is about 1500 ft. Traces of Roman mining occur at Milliden, and the district is of considerable geologieal interest. Votes of thanks were accorded to the readers of the papers.

BIRMINGHAM AND MIDLAND INSTITUTE.—The annual conversazione which has been held during the week has been an enjoyable and successful one. The exhibition of curious scientific apparatus, and the like, is this year even more interesting than usual. A good deal of interest attaches to two collections of etchings and engravings, shown in the great gallery of the Town Hall. One of these, which is lent by Mr. W. R Hughes, consists of the original issues of the works of Charles Dickens, together with books and magazine articles having more or less reference to them; engravings, photographs, woodcuts, and a miscellany of other items. This collection—the fruit of 20 years industrious labour—is full of interest. The scientific department of the conversazione has been arranged by Mr. C. J. Woodward, assisted by Mr. Russell. The following Institute students also rendered useful assistance in showing the various experiments and apparatus:—Messrs. Burton, Briscoe, Bennett, Barnett, Bardell, Baker, jun., Cresswell, Chattaway, Dunlop, Holbrooke, Harker, Jones, Kendrick, Ludgate, Robinson, Ridding, Siggars, Sowter, Tait, Wiltshire, Weaver, and Wright.

IMPROVED FLANGING MACHINE.—A flanging machine for the outside flanging of boiler heads, and similar objects, has been patented by Mr. A. WILBUR, of Allegheny, City Pa. A table is pivotted to the machine frame, as usual, for presenting the work to the rollers. The table is slotted longitudinally, and within the slot, slides an adjustable sectional box, in which is journaled a disc, to the face of which the boiler head to be flanged is secured. One side of the box is recessed to receive a hardened tooth-faced plate, which is engaged by a toothed bar, pivotted at one end to the bottom of the tub, while its other end may be moved toward or away from the box, and locked in either position, so as to engage or not, with the toothed plate.

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Registration of New Companies.

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WIRRAL COLLIERY COMPANY.—Capital 20,000*l.*, in shares of 10*l.* To carry on the trade of colliery proprietors, ironmasters, miners, and smelters, and to adopt two agreements for the purchase for the aggregate sum of 7750*l.* all the freehold property of the Neston Colliery Company, at Little Neston, in the county of Chester. The subscribers (who take one share each) are—Wm. Blain, Brunswick-street, Liverpool; Richard M. Foster, Waterloo; L. W. Evans, Birkdale; C. R. Boutt, Waterloo; H. G. Foster, Rainford; J. Bencke, Chapel-street; D. T. Miller, Neston; E. K. Masywalt, Dale-street; Alfred Bellson, Cook-street.

ROCKLIFF BROTHERS.—Capital 50,000*l.*, in shares of 10*l.* To acquire by purchase the goodwill, machinery, &c., of the business carried on by Robert Rockliff and Francis A. Rockliff, of Liverpool, printers and publishers. The subscribers (who take one share each) are—Robert Rockliffe, Castle-street; F. A. Rockliff, Castle-street; Henry A. Rockliff, Dale-street; H. A. Rockliff, Castle-street; Wm. R. Luke, Chapel-lane, Formby; B. Kennedy, Castle-street; H. M'Ardle, Tithebain-street.

TRAVANCORE ESTATE AND PRODUCE COMPANY.—Capital 25,000*l.*, in shares of 10*l.* To purchase, rent, or lease, land in India, for the cultivation of tea, coffee, cinchona, spice, and other produce thereon, and to manufacture, export, and sell such produce. The subscribers (who take one share each) are—Stanley N. Raikes, major, Dymock, Gloucestershire; Robert N. Raikes, lieut.-gen., St. Edmund's-terrace, Regent's Park; Horace S. Harrison, Torquay; William A. Raikes, King's Bench Walk, Temple; Alan Lambert, St. Helen's-place; Ernest L. Marshall, St. Helen's-place; John Alexander Hanham, St. Helen's-place.

BROOMHEAD AND COMPANY.—Capital 50,000*l.*, in shares of 5*l.* The objects for which the company is established are to carry on the business of sanitary, mechanical, and gas engineers, and all other business relating to lighting, heating, and cooking; also to purchase or otherwise acquire any property [illegible] machinery. The subscribers (who take one share each) are—Alfred L. Elborough, Lombard-street; Wm. M. Dorrit, Teddington; Arthur E. Eames, Upper Norwood; H. M. Eames, Upper Norwood; F. Allnuth, Paternoster-square; Arthur W. Shegller, Paternoster-row; Harry Harris, St Paul's Buildings.

SIR COUTTS LINDSAY AND CO.—Capital 7000*l.* in shares of 1*l.* The object for which this company is established is to carry on the business of an electric light company, and to constitute, establish, lay down, fix, and carry out all necessary cables, wires, lines, accumulators, batteries, lamps, and works; and to generate, accumulate, distribute, and supply electricity, and to light-houses, buildings, streets, and other places, public or private. The subscribers are—Sir Coutts Lindsay, Bart., Belcarres, Fife; Nugent Charles Wade, secretary Clergy Club, New Bond-street; Arthur F. Wade, Athenæum Club; Reginald Brougham, civil engineers, Great George-street, Westminster; J. R. Douglas Mackenzie, civil engineer, Great George-street, Westminster; Arthur Cecil C. Hayward, solicitor, Chancery-lane; George Edward Wade, Albert Mansions.

THE RAILWAY, TRAMWAY, AND GENERAL TRUST COMPANY.—Capital 100,000*l.*, in shares of 1*l.* This company is established for the purpose of applying to Parliament and the Board of Trade for Acts of Parliament or provisional orders as may be necessary or expedient, or for powers to construct, maintain, and work, or acquire, or lease, or obtain running powers over any railways or tramways, extensions, or variations thereof, or to execute any works in connection therewith. The subscribers (who take one share each) are—William Whirldon, consulting engineer, Devonshire Chambers; Angelo E. George, Cannon-street; F. Davies, St. Martin's-lane; Cecil Harrison, Albert-road, Peckham; Claude E. H. Audam, civil engineer, Lancaster-gate, Notting Hill; Louis Freeman, Nicholas-lane; R. T. Linford, accountant, Markham-square, Chelsea.

THE ANGLO-AUSTRIAN PETROLEUM COMPANY.—Capital 200,000*l.*, in shares of 1*l.* To acquire the petroleum properties, with all rights and privileges, at Galicia, in Austria, and to carry on business for sale of petroleum, mineral oils, and kindred matters, distilling, refining, or otherwise utilising the products from any of the company's properties. The subscribers (who take one share each) are—H. J. Muir, Fernbank, Fox Hill, Upper Norwood, civil engineer; Edward Balen, Ryder-street, St. James's, civil engineer; Jos. Peerless, Copthall Buildings, merchant; E. B. Dirchamp, Gordon-street, Gordon-square; G. R. F. Sinibaldy, Argyle Villas, Teddington; G. Fisher, Dalston-lane; John V. Driver, Brachley-terrace, Chiswick, civil engineer.

FLOCKTON MAIN COLLIERY COMPANY.—Capital 20,000*l.* in shares of 5*l.* To form and carry on the businesses of miners and dressers of minerals for the purpose of digging, trenching, working, and getting coal and ironstone; also to acquire by purchase, for the sum of 6000*l.*, from John Marland, for the objects of the company, the lease, machinery, and plant of all and singular the several mines, beds, veins, and seams of coal, in all the fields now belonging to Joseph Emsley and Richard Rogers, of Barnsley, in Yorkshire, forming in the whole 20 acres, and to make, construct, and maintain jetties, railways, and sidings. The subscribers (who take one share each) are—Henry C. Long, Queen's Grove, Longsight, Manchester; Peter Ashcross, Linnon-street, Ashton-under-Lyne; Wm. Evans, Mosley-street West, Manchester; Thomas K. Fox, Silkstone, Barnsley; R. Rogers, Stock-lane, Barnsley; J. Allen, Sheffield-road, Barnsley; Samuel Dyson, Mapplewell, Barnsley.

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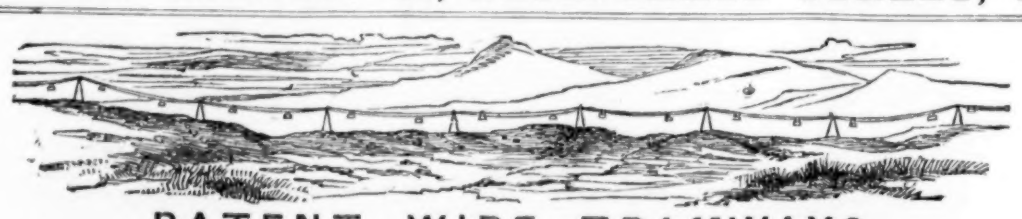

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BRITISH DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
12000	Bedford Unit.,* c, Tayls. (£1 liab.)	0 14	0... 1⅛... 1	1⅛... 1	0 1 0	0 2	0...Nov. 1884
6000	Carn Brea, c, s, Illogan†	13 15	5... 2 ... 1¾	1¾... 1¾	52 11	8... 0 10	0...Nov. 1881
4000	Craignant Bach,* l, Cardigan	5	0.. — ...	— ...	0 5	0... 0 5	0...Nov. 1882
1240	Devon Gt. Consols, c, a, Tavistock*†	1 0	0... 1⅛... 1⅛	2 ...118	7	0... 0 6	9...Dec. 1880
4700	Dolcoath, c, t, Camborne	10 14	10... 70 ...68	70 ... 40	17	9... 1 1	0...Nov. 1884
6400	East Pool, t, c, Illogan	0 9	9... 40 ...39	41 ... 41	3	6... 0 18	0...Nov. 1884
12000	Great Holway,* l, Flintshire	5 0	0... ¾... ½	¾... 0	12	0... 0 7	6...Sept. 1883
15000	Great Laxey, l, Isle of Man*†	4 0	0... 10 ... 9	10 ... 30	8	0... 0 5	0...Oct. 1884
6400	Green Hurth, l, Durham*	0 6	0... 4½... 4	4½... 4	16	0... 0 5	0...July 1884
9830	Gunnislake (Clitters), t, c	2 2	0... ⅜... ¼	⅜... 0	19	9... 0 2	0...Mar. 1882
2400	Isle of Man, l, Isle of Man*	25 0	0... — ...	— ... 83	5	0... 1 0	0...Sept. 1880
6000	Killifreth, t, Chacewater§	4 11	6... ⅞... ⅞	1 ... 0	14	6... 0 2	0...Nov. 1883
20000	Leadhills,* l, Lanarkshire	6 0	0... 1¾... 1⅛	1¾... 1	7	0... 0 1	6...Sept. 1884
2500	Levant, c, t, St. Just	11 0	0... — ...	— ... 9	2	6... 0 2	6...Oct. 1884
400	Lisburne,* l, Cardiganshire	18 15	0... — ...	— ...615	0	0... 0 10	0...June 1883
10000	Mellanear, c, Hayle*	2 5	0... 1 ... ¾	1 ... 2	4	3... 0 0	6...Jan. 1884
9000	Minera Mining Co., l, Wrexham*	5 0	0... 7 ... 6	7 ... 69	14	2... 0 2	6...Aug. 1884
20000	Mining Co. of Ireland, ci, c, l*	7 0	0... 1⅛... 1	1⅛... 24	0	0... 0 2	6...Jan. 1880
1829	North Hendre, l, Wales	2 10	0... — ...	— ... 3	18	0... 0 4	0...Nov. 1882
8146	Ditto	1 7	6... — ...	— ... 0	11	3... 0 2	0...Nov. 1882
12000	Phœnix United, t, c, Linkinhorne§	6 5	3... 1½... 1¾	1¾... 17	7	6... 0 1	6...Apr. 1883
12000	Roman Gravels, l, Salop*	7 10	0... 3½... 3	3½... 9	13	6... 0 2	0...Sept. 1884
6123	South Condurrow, t, c, Camborne†	7 5	7... 8¼... 7½	8¼... 11	13	6... 0 5	0...Jan. 1885
9000	South Darren, l, Cardigan*	1 16	3... 5⅛... 5	5⅛... 3	4	0... 0 2	0...Apr. 1880
6000	Tincroft, c, t, Pool, Illogan†§	14 7	6... 6¼... 5¾	6¼... 51	3	6... 0 5	0...Dec. 1881
15000	Van, l, Llanidloes* (in liq.)	4 5	0... 1½... 1	1½... 25	13	0... 0 2	6...Jan. 1883
6000	West Basset, c, Illogan†§	7 18	4... 1½... 1	2½... 28	3	8... 0 6	8...Apr. 1882
6000	West Kitty, t, St. Agnes	0 12	0... 8½... 8¼	8¼... 3	9	0... 0 3	0...Nov. 1884
6000	Wheal Agar, t, Illogan	19 5	0... 21 ...19	20½... 1	10	8... 0 2	6...Dec. 1884
12000	Wheal Crebor, c, Tavistock	2 4	6... 1 ... ⅞	1⅛... 1	1	3... 0 2	0...Nov. 1883
1024	Wheal Eliza Consols, t, St. Austell	18 0	0... — ...	— ... 59	10	0... 0 10	0...Aug. 1884
6000	Wheal Grenville, t, Camborne	15 0	0... 6¼... 5¾	6¼... 2	6	0... 0 2	6...Dec. 1884
4295	Wheal Kitty, t, St. Agnes§	5 12	0... ¾... ¼	1⅛... 12	18	6... 0 1	6...Jan. 1881
3000	Wheal Peevor, t, Redruth§	14 18	0... ⅜... ¼	½... 8	13	6... 0 4	0...Mar. 1881

FOREIGN DIVIDEND MINES.

3,000	Alamillos, l, Spain*†	2 0	0... 1⅜... 1⅛	1¾... 2	16	8... 0	8 6...Sept. 1884
150000	Almada and Tirito Consol., s*†	1 0	0... 3/16... 1/16	3/16 ... 0	8	3... 0	1 0...May 1876
20000	Australian, c, South Australia†	7 7	6... 2 ... 1½	2 ... 1	11	0... 0	1 6...July 1884
15000	Birdseye Creek, g, California*	4 0	0... ⅞... ¾	⅞ ... 1	9	0... 0	2 0...Dec. 1884
30000	Bratsberg,* c, Norway†	2 0	0... 1⅛... ⅞	1⅛... 0	4	4½	0 1 2½Mar. 1884
150000	California,* g, Colorado	1 0	0... ⅜... ¾	⅜ ... 6	3	0... 0	1 0...Aug. 1884
20000	Cape Copper Mining,*† South Africa	8 0	0... 37 ... 38	39 ... 60	17	6... 1	0 0...Dec. 1884
65000	Colorado United, s-l Colorado*†	5 0	0... 2¾... 2¼	2½... 0	14	6... 0	1 0...May 1883
50000	Copiapo, c, Chili* (£4 shares)†	3 10	0... 2½... 2⅛	2⅜... 2	7	9... 0	1 6...Dec. 1884
32200	El Callao, g, Venezuela (foreign)	40 0	0... 70 ...65	70 ... 36	16	9... 0 16	0...Nov. 1884
70000	English & Australian,*† c, S. Aust.	2 10	0... — ...	— ... 3	2	9... 0	1 0...Mar. 1884
2000	Eng.-Aus., g, Vict.* pref. (20000 o.)	1 0	0... — ...	— ... 0	3	8... 0	3 8...Apr. 1882
25000	Fortuna, l, Spain*†	2 0	0... 3¼... 2⅞	3⅛... 8	14	3... 0	2 10...Sept. 1884
72000	Frontino & Bolivia, g, New Gran.*†	2 0	0... ⅛... ⅜	⅛... 0	12	0... 0	1 0...Dec. 1883
400000	La Plata, s-l, Leadville†	0	0... 5/16... 5/16	0	6	6... 0	0 7½Oct. 1882
15000	Linares, l, Spain*†	3 0	0... 3½... 2⅞	3½... 19	13	4... 0	3 0...Sept. 1884
20000	Marbella Iron Ore,*, Spain	10 0	0... 2½... 1¾	2¼... 9	10	0... 0	10 0...June 1882
185164	Mason & Barry*c, Portugal	10 0	0... 8½... 8½	9⅛... 4	3	0... 0	8 0...Oct. 1884
600000	Montana,* g., U.S.A.	2 0	0... ⅞... 1⅛	1... 0	0	8... 0	0 8...July 1884
125000	Oxford, g, Nova Scotia (foreign)	0 4	0... 3/16... ¼	5/16... 0	1	3½	0 0 1¼Mar. 1884
80659	Quebrada Rail., Land, & Cop. Venezuel	10 0	0... 3½... 3	3½... 6 per cent.			...1882
50000	Panulcillo, c, Chili*†	4 0	0... 3 ... 2¾	3 ... 2	0	9... 0	2 0...May 1884
25000	Pitangui,* g, Brazil (in. 6000 £1 pd).	0 18	0... 3/16... ¼	3/16... 0	1	0... 0	0 1 0...Sept. 1880
14000	Pontgibaud, s-l, France†	20 0	0... 4½... 4⅛	4¼... 30	3	1... 0	11 3...Dec. 1883
60000	Port Phillip, g, Clunes*† (£2 shares)	1 0	0... 9/16... 9/16	9/16... 1	14	2... 0	0 10...Feb. 1881
50000	Rara Fortuna,* s, Argent. Republic	1 0	0... — ...	— ... 0	3	0... 0	1 0...July 1882
54000	Richmond Consol., s, Nevada*†	5 0	0... 3⅝... 3½	3⅝... 15	1	6... 0	5 0...Nov. 1884
26000	Rio Tinto,*c, Mortgage Bds., Huelva	100	0... 99 ... 97	99 ...	5 per cent.		...Jan. 1885
325000	Ditto, shares	10 0	0... 13⅛... 13⅜	13⅝... 4	16	0... 0	10 0...Nov. 1884
60000	Santa Barbara,* g, Brazil	0 10	0... 1⅛... 1⅛	1⅜... 0	12	9... 0	1 0...May 1882
12000	Schwabs Gully, d, Kimberley foreign)	10 0	0... 5⅝... 6	6... 8	10	6... 0	8 0...Oct. 1884
120000	Scottish-Australian Mining Co.*†	1 0	0... 2¾... 2½	2½... 20	p. cent.	0	2 0...Oct. 1884
80000	Ditto, New	0 10	0... 1⅜... 1⅛	1⅜... 20	p. cent.	0	1 0...Oct. 1884
1752500	Sierra Buttes, g, California*†	2 0	0... 1⅜... 1⅛	1⅜... 2	7	0... 0	0 8...Oct. 1884
140625	Ditto, Plumas Eureka	2 0	0... ⅞... ¾	⅞... 1	0	0... 0	1 6...Oct. 1884
253000	St. John del Rey*†(£5 Stock and multiple dealt in)		...70	80 ...	5	p.c. for half-year, June 1882	
160000	Tambracherry, g, Wynaad	1 0	0... ¾... 5/16	5/16... 8	0	5... 0	0 6...Aug. 1882
625000	Tharsis,* c, sul, Spain (587330 issued)†	2 0	0... 5½... 5¼	5¾... 6	18	6... 0	11 0...May 1884
14900	Tolima,* g, s, Colombia (A shares)	5 0	0... 5 ... 4	4½... 6	2	2... 0	5 0...Jan. 1885
6000	Ditto (B shares)	5 0	0... 3 ... 2	2½... 1	5	3... 0	0 6...Jan. 1885
25000	Victoria* (London), g, Australia	1 0	0... 5/16... ¼	5/16... 0	13	10... 0	0 8...Feb. 1881
124221	United Mexican,*‖ s, Mexico	9 17	6... 3½... 3¼	3¾... 0	5	0... 0	2 6...Nov. 1884
100000	Victorine (Nevada, U.S.) Deb. Bds.	1 0	0... — ...	— ... 0	4	6... 0	2 6...Nov. 1884
15000	Western Andes, s, Colombia	5 0	0... 5 ... 4¾	5 ... 3	16	3... 01	0 6...Aug. 1884
2100	W. Prussian (5500 pref. sh. £10 pd.)	10 0	0... — ...	— ... 4	2	0... 0	8 0...Apr. 1881
54800	Yorke Pen., c, South Aust. Pref.†	1 0	0... 3/16... 1/16	3/16... 0	3	0... 0	1 0...May 1882

§ Have made calls since last dividend was paid.

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Shares.		Paid.	Last wk.	Clos. pr.
25000	Aberdolwa,* l, Denbigh	1 10	0... — ...	—
12000	Anderton, t, c, l, Devonshire	1 6	... ⅛...	3/16
12000	Appleton, l, Carnarvonshire*	5 0	0... — ...	—
3230	Bible Hills t, c, St. Agnes§	4 13	6... ⅛...	⅜ ⅛
10000	Brada,* l, Isle of Man	1 0	0... — ...	—
30000	British,* s-l, bl, Wrexham	1 0	0... — ...	—
20000	British Manganese Company*	1 0	0... — ...	—
10000	Burnhope, * l, Edmondbyers '	0 5	0... 2½...	2½
20000	Bwich United,* l, Cardigan	1 0	0... — ...	—
12000	Collacombe Consols, c, bl, Lamerton	0 2	6... ⅛...	⅛ ⅛
50000	Carn Camborne,* t, c, Camborne	1 0	0... ⅛...	⅛ ⅛
37500	Carnarvonshire Cons.,*l, Llanrwst.	2 0	0... ⅛...	⅛ ⅛
6400	Coalwell,* l, Cumberland†	2 19	0... 1⅛...	1 1⅛
6600	Cathedral, c, t, Gwennap	1 16	0... — ...	—
20000	Central Foxdale,* l, Isle of Man	1 18	6... — ...	—
300000	Clifford Amalgamated	1 0	0... 1⅛...	1⅛ 1⅛
25000	Coed-y-Fedw & Pant-y-Buarth,* l	1 0	0... ⅛...	⅛ ⅛
2450	Cook's Kitchen, t, Illogan†	38 0	9... 14½...	13 14
50000	Craigiog,* l, bl, Denbighshire	0 17	0... — ...	—
36400	Crook Burn,* l, Cumberland	0 17	0... — ...	—
12000	D'Eresby,* l, bl, Llanrwst. £1 share	0 10	0... ⅛...	⅛ ⅛
12000	Derwent,* l, Durham	4 0	0... — ...	—
60000	Devon Friendship,* c, ars, Tavistock	1 0	0... ⅛...	1/16 1/16
12000	Devon Great United* (2l. shares)	1 17	6... ⅜...	⅛ ⅜
50000	Drakewalls,* t, c Calstock	0 15	0... 3/16...	1/16 3/16
50000	Dueby Peru,* bl, l, s, Cornwall	1 0	0... 1⅛...	⅜ 1⅛
12000	East Blue Hills, t, St. Agnes	0 5	0... ⅛...	5/16 7/16
6000	East Botallack, t, St. Just	1 2	6... — ...	—
6144	East Caradon, c, St. Cleer†	5 2	0... ⅛...	⅛ ⅛
30000	E. Craven Moor,* l. Pateley Bridge	1 0	0... — ...	—
15000	East Devon Cons., c, Buckfastligh.	2 0	0... ⅛...	⅛ ⅛
20000	East Long Rake,* l, Wales	1 0	0... — ...	—
25500	East Roman Gravels,* l, Salop	1 0	0... — ...	—
18000	East Van, l, Llanidloes*	5 0	0... — ...	—
2048	East Wheal Lovell, t, Helston	3	6... ⅜...	⅛ ⅜
100000	East Wheal Rose,* s-l, Newlyn East	1 0	0... 7/16...	5/16 7/16
25000	Eaton,* c, Wetton	1 0	0... 2 ...	1½ 2
12500	Froagoch,* l, Cardgn (11000 sh.iss.)	2 0	0... ⅛...	⅜ ⅛
12000	Gawton,* c, Tavistock	2	0... ⅜...	⅛ ⅜
40000	Glasg. Car.,c* (30000sh. £1 pd., 10000		0... ⅛...	⅜ ⅛
30000	Gobbett,* t, Devon	1 0	0... — ...	—
10000	Goddards,* l, o, Carnarvon	1 0	0... — ...	—
32000	Goginan,* l, Cardiganshire	1 0	0... ⅛...	⅛ ⅛
25000	Goodevere, t, St. Cleer	1 0	0... 1⅛...	1 1⅛
8500	Gorsedd and Merllyn Con., l, Flint.	2 10	0... ⅛...	⅛
6000	Great West Chiverton, t, St. Agnes.	0 6	6... ⅛...	⅛ ⅛
50000	Great W. Shepherds* l, Cornwall		0 0... 1 ...	⅞ 1
20000	Grogwinion, l, Cardigan*	2 0	0... — ...	—
10000	Gwern-y-Kynydd,* s-l, Flint (pref.)	4 0	0... ⅛...	⅛ ⅛
8400	Hardships,* l, Westmore. (10s. sh.)	0 7	6... 1 ...	½ 1
12000	Herodsfoot, l, near Liskeard†	1 6	0... ⅛...	⅛ ⅛
18000	Hingston Down, c, Calstock*†	0 13	0... ⅛...	⅛ ⅛
35000	Holway Consols,* l, Flintshire	1 0	0... — ...	—
25000	Kit Hill Gt. Cons.,* c, ars-m, (2l. sh.)	1 2	6... ⅛...	1/16 ⅛
15000	Lady Ann,* s-l, Llanarmon	1 0	0... — ...	—
15000	Llandegla,* l, Wales	1 0	0... — ...	—
5120	Lovell, t, Wendron	1 8	0... ⅜...	⅛ ⅜
9000	Marke Valley, c, Linkinhorne†	7 15	6... ⅛...	⅜ ⅛
8000	Mona,* c, Anglesea	5 0	0... — ...	—
20000	Mona Consols,* c, Anglesea	1 0	0... — ...	—
20000	Mostyn Consols,* s-l, Flint	1 0	0... — ...	—
12000	Morfa Du, s, g, s, Anglesea*	1 0	0... — ...	—
80000	Mounts Bay,* c, t, Breage	1 0	0... 3s...	2s. 3s.
6144	Mount Carbis, t, c, Redruth	1 19	0... 2⅛...	1⅞ 2⅛
12000	New Caradon, c, St. Cleer	0 8	0... 3s...	2s. 3s.
2400	New Cook's Kitchen, t, Illogan	10 5	6... 1 ...	¾ 1
8000	New Dolcoath, t, c, Camborne*	3 0	0... — ...	—
10000	New Holmbush,* t, c, Callington	4 0	0... — ...	—
6000	New Kitty, t, St. Agnes	1 11	0... 1⅛...	1⅛ 1⅛
25000	New Langford, s, c, Callington	0 2	6... 3/16...	⅛ 3/16
15000	New Redmoor,* var, Callington	1 5	0... — ...	—
17500	New Terras,* t, St. Austell	2 0	0... 2⅛...	2 2⅛
3500	New Tincroft,* t, Lelant	6 0	0... — ...	—
12000	New Trumpet,* t, Wendron	1 0	0... 1 ...	¾ 1
40000	New Van Cons. & Glyn,*†,	7 0	0... — ...	—
12000	New West Caradon, c, Liskeard	0 7	6... 3s...	2s. 3s.
3000	New Wheal Peevor, t, Redruth	0 10	0... — ...	—
12000	North Blue Hills, t, St. Agnes	0 2	6... 2s ..	1s. 2s.
5328	North Busy, t, c, Scorrier ‖	2 4	8... 2s ..	1s. 2s.
10000	N. D'Eresby Mount..* t, bl, Carnarv.	1 0	0... — ...	—
25000	North Goginan,* l, Cardiganshire	1 0	0... — ...	—
6400	North Great Hurth,*	1 0	0... ⅛...	⅛ ⅛
25000	North Grogwinion,* s-l, Cardigshr	1 0	0... ⅜...	⅛ ⅜

NON-DIVIDEND MINES—continued.

Shares.		Paid.	Last wk.	Clos.
2000	North Herodsfoot, l, Liskeard	0 13	6... — ...	—
2000	North Levant, t, c, St. Just	14 13	6... — ...	—
60000	North Molton,* c, ms, s, Devon	1 0	0... — ...	—
2936	North Treskerby, c, St. Agnes	1 0	0... — ...	—
8000	Northern,* l, Durham	8 17	10... — ...	—
40000	Okel Tor,* t, c, a, Calstock	1 0	0... — ...	—
80000	Old Shepherds* s-l, Cornwall	1 0	0... — ...	—
60000	Owen Vean & Tregur.,* t, c, Marazion	1 0	0... — ...	⅛... ⅛
30000	Par,* t, St. Austell	1 0	0... 1⅛...	1
45000	Parys Corporation,* c, Anglesea	1 0	0... 1⅜...	1⅜
7500	Pateley Bridge, l, Yorkshire	1 0	0... — ...	—
6000	Pedn-an-drea, t, Redruth	4 10	0... — ...	⅜... ⅛
6000	Pennant, l, bar, North Wales*	5 0	0... — ...	—
20000	Penegarreg, l, Carmarthenshire	1 0	0... — ...	—
15000	Pen-yr-Oraedd,* l, Flintshire	1 0	0... — ...	—
10000	Polberro, t, St. Agnes	0 3	0... 2⅜...	2⅛
12000	Polcrebo, t, Crowan	0 11	3... 2 ...	1⅞
10000	Port Nigel Syn,* s-l, Carnar. (40001s.)	0 15	0... — ...	—
13000	Pr. Patrick,* s-l, (als. 12000 pf. 10 p.c)	1 0	0... — ...	—
12000	Prince of Wales, s, c, t, Calstock	1 2	0... 3/16...	5/16
36000	Russell United,* c, Tavistock	0 9	0... — ...	—
30000	Silver Hill,* Callington	1 0	0... — ...	—
50000	Sinclair,* l, bl, Whitford	1 0	0... ⅛...	⅛
40000	Sortridge,* c, Horrabridge	1 0	0... — ...	—
50300	South Caradon,* c, St. Cleer†	1 0	0... — ...	—
8000	South Carbis, t, c, Redruth	0 10	0... ⅛...	⅛
42000	So. Devon Unit.,* c, Buckfastleigh	1 0	0... ⅛...	⅛
5000	South Dolcoath, c, t, Illogan	0 19	0... ⅛...	⅛
6000	South Kitty, t, St. Agnes	0 10	0... ⅛...	⅛
8000	South Penstruthal, t, c, Gwennap	4 2	6... ⅛...	⅛
30000	So. Phœnix & Caradon,*t, c, Linkinhn.	1 0	0... ⅛...	⅛
6000	South Tolcarne, t, c, Camborne	5 11	6... ⅛...	⅛
2043	South Wheal Crofty, c, Illogan	7 4	6... ⅛...	⅛
6000	South Wheal Frances, t, Illogan†..	10 4	4... 7 ...	7
30000	Standard,* l. bl., Llanrwst	1 0	0... 1⅛...	1
40000	Tamar, s-l, Bearalston*	1 0	0... — ...	—
12000	Trebartha Lemarne, t, Northill	0 6	3... — ...	—
6000	Tregembo, t, c, Cornwall	4 0	0... — ...	—
50000	Tregontrees and Old Polgooth Con..	1 0	0... ⅛...	⅛
100000	Tresavean,* t, c, Gwennap	1 0	0... ⅜...	⅜
8000	Trevaunance, t, St. Agnes	0 18	0... 2⅛...	2⅛
1000	Vaughan,* l, Cardiganshire	10 0	0... — ...	—
50000	Weardale,* l, Northumber. (4l. share)	1 5	0... 1⅛...	1
12000	West Assheton, l, Carnarvon	1 0	0... — ...	—
12000	West Caradon, c, St. Cleer	0 10	0... 2s...	1s.
30000	West Cornwall,* t, Cornwall	1 0	0... 1⅛...	1
3000	W. Craven Moor, l, Pateley Bridge*	10 0	0... — ...	—
12000	West Crebor, c, Tavistock	0 13	0... 2s...	1⅛
10240	West Devon Consols, c, Calstock	1 2	0... ⅛...	⅛
10000	West Godolphin, t, c, Breage	1 3	6... 1 ...	¾
12000	West Gonamena, c, St. Cleer	0 1	0... — ...	—
15000	West Holway,* l, Flintshire	1 0	0... — ...	—
20000	West Lisburne,* l, Cardigan	1 0	0... 3/16...	1/16
3000	West Mary Ann, l, Menheniot	1 18	0... ⅛...	⅛
20000	W. Pateley Bridge, l, Yorkshire	1 0	0... — ...	—
12000	West Phœnix, t, Linkinhorne	1 8	3... ⅛...	⅛
6000	West Polbreen, t, c, St. Agnes	0 10	0... ⅛...	⅛
5190	West Poldice, St. Day†	7 10	6... ⅛...	⅛
6144	West Wheal Frances, t, Illogan†	14 10	1... 8 ...	8
3000	West Wheal Peevor, t, Redruth	4 17	6... ⅜...	⅜
2400	West Wheal Seton, c, Camborne§	21 0	0... 2⅛...	1⅞
6144	Wheal Basset, c, Illogan†	9 7	6... 4 ...	3⅝
4000	Wheal Benny, t, c, Latchley	5 0	0... 6⅛...	5⅜
3000	Wheal Boys, t, Redruth	1 3	6... — ...	—
50000	Wheal Castle,* c, t, St. Just	1 0	0... 1 ...	⅜
12000	Wheal Coates, t, St. Agnes	0 12	0... ⅜...	⅜
2585	W. Comf., & No. Tres., t, c, Gwennap	2 2	0... ⅛...	⅛
50000	Wheal Elizabeth,* t, Cornwall	1 0	0... — ...	—
12288	Wheal Jane, t, Kea†	3 11	0... 3s...	2s.
12000	Wheal Jewell, c, St. Hilary	1 0	6... ⅛...	⅛
12000	Wheal Lusky, t, Callington	0 3	9... 3/16...	⅛
12000	Wheal Metal and Flow, t, Breage	0 2	6... ⅛...	⅛
2000	Wheal Owles, t, St. Just†	7 3	0... — ...	—
30000	Wh. Silver & Lanteglos,*s-l, Camelfd.	1 0	0... ⅛...	⅛
6000	Wheal Sisters, t, Lelant	4 2	6... — ...	—
4096	Wheal Uny, t, c, Redruth	21 7	0... ⅛...	⅛
21866	Wye Valley, t, Montgomery.*	1 0	0... — ...	—
60000	Yeoland Consols,* t, Devonshire	0 12	6... — ...	—
4000	Ystwith,* l, Cardigan	1 0	0... — ...	—

bl, blende; c, copper; g, gold; l, lead; s, silver; sl, slate. s-l, silver-lead; t, tin; z, zinc; i, iron; a, arsenic; d, diamond. *Limited Liability Companies; † quoted on the Stock Exchange ‡ have paid dividends.

NON-DIVIDEND FOREIGN MINES; FOREIGN AND MISCELLANEOUS STOCKS; TRAMWAYS; INSURANCE COMPANIES; GAS, IRON AND COAL, FINANCIAL AND INVESTMENT COMPANIES, &c.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Clos.	pr.
150000	Akankoo,* g, Gold Cst. (100000 iss.)	1 0	0...	⅛ ⅛
34429	Anglo-African,*d, Kimberley,†	10 0	0...	1 2
12000	Arendal, c, Norway	4 0	0...	
20000	Asia Minor,*s-l, Lidjesy, Sivas	0 15	0...	3/16 3/16
1200000	Balkis,* g, Transvaal	1 0	0...	3/16 ¼
28000	Belt,* c, Lake Sup., (220.0 £4 paid)	5 0	0...	
200000	British Australian,* g, N. So. Wales	1 0	0...	
10000	Buena Ventura,* l, Spain (fy.pd.)	2 0	0...	
180000	Callao Bis,*g, Venezuela	1 0	0...	⅛ ⅜
132500	Canadian, c, sul,* Canada†	4 0	0...	⅛ ⅛
500000	Chile,* c, Venezuela (New)	1 0	0...	⅜ ⅜
125000	Chontales, g, s, Nicar.*† (108749 iss)	1 0	0...	1/16 3/16
75000	Colombian Hydraulic, g, Colombia	1 0	0...	⅜ ⅜
200000	Devala Moyar,* g, Wynaad†	1 0	0...	⅛ ⅛
75000	Devala Provident,* g, Wynaad†	0 10	0...	⅛
25000	Don Pedro North del Rey*	1 0	0...	¼ ⅜
214200	Eberhardt, s, Nevada*†	1 0	0...	1/16 3/16
65000	Eureka,*s, Nevada	1 0	0...	
40000	Georgia,* g, United States	10 0	0...	
80000	Gold Coast,* g, Wassau	1 0	0...	
40000	Gold Hill,* g, North Carolina	1 0	0...	
140000	Hoover Hill,* g, North Carolina	1 0	0...	3/16 3/16
12000	Hultafall,*l, bl, Orebro, Sweden	5 0	0...	
560000	Indian Consolidated,* g	1 0	0...	⅜ 3/16
240000	Ind. Glenrock,* g, Wynaad†	1 0	0...	1/16 3/16
100000	Iron Gate*cl. clay. Hungary	1 0	0...	
108000	I.X.L., g, s, California*	1 0	0...	1/16 3/16
50000	Javali, g, Nicaragua*	2 0	0...	
1000	Kapanga,* g, New Zealand	1 0	0...	⅛
100000	Kohinoor,* s, Colorado	1 0	0...	3s. 3s. 6d.
120000	Kongsberg,* s, Norway (1l.)	3 5	0...	
130000	La Trinidad,* s, Sonora, Mexico	5 0	0...	5⅛ 5⅜
800000	Lisbon-Berlyn,* g, South Africa	1 0	0...	⅜ ⅜
65000	London and California, g*†	2 0	0...	
100000	Michipicoten,* nat. c, Quebec	1 0	0...	
50000	Moselle,* l, b-l, Germany	1 0	0...	
119000	Mysore,* g, India†	1 0	0...	⅜ 1⅜
75000	New Callao,* g, Venezuela	1 0	0...	⅛ ⅜
72500	New Emma,* s, Utah	10 0	0...	⅜ ⅜
19000	New Potosi,* g, Venezuela†	1 0	0...	⅜ ⅜
180000	North Mexican, s, Mexico	1 0	0...	
3000	Do. debentures do.	7 0	0...	11 12
100000	Nundydroog,* g, Mysore	1 0	0...	— ⅛ ⅛
50000	Olathe,* s-l, Leadville, Colorado	1 0	0...	
25000	Ooregum,* g, Mysore	1 0	0...	⅛ 3/16
12000	Oregon g, U.S. (4000 prf. sh.)	0 2	6...	
10000	Organos,* g, Colombia	1 0	0...	⅛ ⅜
28000	Orita,* g, Colombia	1 0	0...	1⅛ 1⅜
75000	Oscar,* g, Norway (£1)	0 15	0...	¾ ⅞
80000	Ouro Preto*g, Brazil	5 0	0...	
80000	Pestarena United, g, Italy*†	3 0	0...	0 ⅛
60000	Pierrefitte* (20000 pref.)	1 0	0...	
100000	Placerville, g, q, California	1 0	0...	
40000	Ravenscliff g, N. Zind; s, S. Aust.	1 0	0...	
90000	Rhodes Reef,* g, Wynaad†	1 0	0...	1/16 3/16
25300	Ruby and Dunderberg, g, Nev.*†	10 0	0...	⅛ ⅛
250000	Sentein,* s-l, bl, Ariege